S. Hrg. 102-122

CENTRAL VALLEY PROJECT IMPROVEMENT ACT

HEARINGS

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

ONE HUNDRED SECOND CONGRESS

FIRST SESSION

ON

S. 484

TO ESTABLISH CONDITIONS FOR THE SALE AND DELIVERY OF WATER FROM THE CENTRAL VALLEY PROJECT, CALIFORNIA, A BUREAU OF RECLAMATION FACILITY, AND FOR OTHER PURPOSES

LOS ANGELES, CA, MARCH 18, 1991
WASHINGTON, DC, MAY 8, 1991
SACRAMENTO, CA, MAY 30, 1991

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CENTRAL VALLEY PROJECT IMPROVEMENT ACT

MONDAY, MARCH 18, 1991

U.S. Senate,
Subcommittee on Water and Power,
Committee on Energy and Natural Resources,
Los Angeles, CA.

The subcommittee met, pursuant to notice at 9:02 a.m., in room 1138, State Office Building, Los Angeles, CA, Hon. Bill Bradley, presiding.

OPENING STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM NEW JERSEY

Senator **Bradley**. The subcommittee will come to order.

The Subcommittee on Water and Power is pleased to be here in Los Angeles today to hear the views of those who would be directly affected by S. 484, the Central Valley Project Improvement Act.

I introduced this legislation along with Senator Cranston to try to deal with short and long-term water problems of California. No legislation or Government agency can bring rain to the State. Although, given what's happened in the last 24 hours, I might want to make a claim, but I will not. Senator Seymour might want to make a claim, but he will not.

Drought is a recurring, unavoidable reality for California. This drought may be a crisis, but it is also an opportunity. As the water level has dropped in California's reservoirs, the legal and policy foundations of the State's water supply system have come to light. The drought has given us all the first chance in decades to take a close look at how and why water does or does not move around the State of California.

What has been revealed is a foundation that is in no condition to bear the stresses that we are putting on it. We see the results of the weaknesses of that foundation all around us. Fish and wildlife are dying. Water quality is deteriorating. Many water users are enduring severe cutbacks while others remain virtually unaffected. The climate for investment in California is clouded by the State's international image of drought and scarcity.

Here, in Los Angeles—in California—and in Washington, it is convenient to blame the drought for these results. But how could you blame drought for the fact that after 5 years of low rainfall, farmers are still growing rice in the desert while millions of other Californians have had to watch their crops and gardens die? Is it the fault of drought that irrigators are under no requirement to conserve water? Did drought block water marketing, water meters? Did drought make the decision to use up water reserves before the rains came back? Is drought the reason the Secretary of Interior plans to lock up one-fifth of this State's water supply for the next 40 years without regard for the environmental, economic, or social consequences?

It should not be a crisis when there is no rain in the desert. The fact that it is a crisis means that we have not planned ahead for a predictable reality.

It is no answer at all to tackle this year's water shortages as if the drought will not recur and population growth can be ignored. I commend Governor Wilson for the steps he has taken toward a better system. I recognize that many Californians are working hard to find meaningful solutions.

This legislation, S. 484, is aimed at fixing the portion of California's water system which belongs to the Federal Government; 20 percent of California's water is tied up in the Central Valley Project. Weaknesses in the management of this project affect everyone in the State.

The Central Valley Project can no longer resist change. Because change is always controversial, I expected this legislation to attract strong views on either side. I intend to listen carefully to all views and consider any suggestions to improve this bill to meet better all of the State's water needs. But I expect all those involved in the Central Valley Project to recognize that maintaining the status quo is not one of the options, nor would it be in the State's interest.

Consider what will happen if we fail to address the CVP's environmental debt now. The agribusiness, family farmers, and towns of the Central Valley should look at what has happened to their counterparts among the logging companies, small mills and timber communities of the Pacific Northwest. How much longer can the CVP continue to push fish and wildlife toward extinction before the project itself triggers the enormous cost of the Endangered Species Act? How long can it be before a Federal court finds itself running the CVP to prevent further blatant violations of the Clean Water Act or Migratory Bird Treaty Act or other environmental laws?

It might not even be a Federal court that takes control of the CVP away from its beneficiaries. As the environmental damage builds, how long can it be before the trail of parched and poisoned rivers compels a California State court to apply the Public Trust Doctrine to the project's water rights?

We would do the CVP's current and future water users no favor by standing aside and letting the CVP slide over the brink. Nothing could be more disruptive to the Valley's economy or create more uncertainty about future water supplies. At the very least, the Federal and State Governments must act immediately to begin restoring the fish and wildlife which have been damaged by our respective water projects.

This bill would commit the Federal Government to take care of its share of the problem.

The water users of the Central Valley have been insulated from the real cost of their project to the environment for years. They have also been insulated from the real cost of their massive use to the overall water supply of the State of California. We need to put two new words into the CVP's vocabulary: "efficiency" and "flexibility". Efficiency, achieved through water conservation, would reduce total demand and free up water for new and pressing needs. Flexibility, achieved through voluntary water transfers and water banking, could help meet shortages in the Valley and elsewhere, including here in Southern California. These market forces would help the CVP avoid tighter Government control and help the project become part of California's long-term water solution.

I am personally very grateful to the many Californians who appeared at this Subcommittee's hearing 2 years ago in Sacramento; and who, over the last 2 years, have continued to share their expertise with the Subcommittee. Many of those witnesses are with us again today and I have spoken with a number of people in this room just in the last few days.

I want to make sure that you and the California water community understand that, while I am determined to enact legislation to address fully the CVP's environmental and water management problems, I remain open to your suggestions for a better means to that end. I have no intention of discouraging local problem-solving or the types of negotiations which are now underway among agricultural, urban and environmental interests. Indeed, I hope to encourage these negotiations and, above all, prevent the worst case scenario which would be for a Federal or State court to be left with no alternative but to take away the autonomy of the CVP and its beneficiaries altogether.

We are fortunate today to be joined by many of the State's most experienced and thoughtful water experts. I am grateful to all of the witnesses who have taken the time to come before the Subcommittee today and share their view about this piece of legislation and about California's water problems, generally.

[The prepared statement of Senator Bradley and the text of S. 484 follow:]

PREPARED STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM NEW JERSEY

The Subcommittee on Water and Power is pleased to be here in Los Angeles to hear the views of those who would be directly affected by S. 484, the Central Valley Project Improvement Act. I introduced this legislation with Senator Cranston because we believe that improving the rules by which the Federal government runs this State's largest water project will help California cope with this drought and meet the State's water needs in the future. Moreover, if this bill becomes law, I believe that the Central Valley Project will begin to contribute to the protection and restoration of California's environment, which is a social, legal, and economic priority for all of us.

No legislation or government agency can bring rain to this State. Drought is a recurring, unavoidable reality for California. This drought may be a crisis, but it is also an opportunity. As the water level has dropped in California's reservoirs, the legal and policy foundations of the water supply system have come to light. The drought has given us all the first chance in decades to take a close look at how and why water does and doesn't move around this State.

What has been revealed is a foundation that is in no condition to bear the stresses that we are putting on it.

We see the results of the weaknesses of that foundation all around us. Fish and wildlife are dying. Water quality is deteriorating. Many water users are enduring severe cutbacks while others remain virtually unaffected. The climate for investment in California is clouded by the State's international image of drought and scarcity.

Here and in Washington it is convenient to blame the drought for these results. But how can you blame drought for the fact that after five years of low rainfall, farmers are still growing rice in the desert while millions of other Californians have had to watch their crops or gardens die? Is it the fault of drought that irrigators are under no requirement to conserve water? Did drought block water marketing? Water meters? Did drought make the decision to use up water reserves before the rains came back? Is drought the reason the Secretary of the Interior plans to lock up one-fifth of this State's water supply for the next 40 years without regard for the environmental, economic, or social consequences?

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This legislation, S. 484, is aimed at fixing the portion of California's water system which belongs to the Federal government. 20 percent of California's water is tied up in the Central Valley Project. Weaknesses in the management of this project affect everyone in the State.

The Central Valley Project can no longer resist change. Because change is always controversial, I expect this legislation to attract strong views on either side. I intend to listen carefully to all views and consider any suggestions to improve this bill to meet better all the State's water needs. But I expect all those involved in the Central Valley Project to recognize that maintaining the status quo is not one of their options, nor would it be in their interest.

Consider what will happen if we fail to address the CVP's environmental debt now. The agribusiness, family farmers, and towns of the Central Valley should look at what's happened to their counterparts among the logging companies, small mills, and timber communities of the Pacific Northwest. How much longer can the CVP continue to push fish and wildlife toward extinction before the project itself triggers the enormous cost of the Endangered Species Act? How long can it be before a Federal court finds itself running the CVP to prevent further blatant violations of the Clean Water Act, Migratory Bird Treaty Act or other environmental laws?

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The water users of the Central Valley have been insulated from the real costs of their project to the environment. They have also been insulated from the real costs of their massive water use to the overall water supply of the State. We need to put two new words into the CVP's vocabulary: efficiency and flexibility. Efficiency, achieved through water conservation, would reduce total demand and free-up water for new and pressing needs. Flexibility, achieved through voluntary water transfers and water banking, could help meet shortages in the Valley and elsewhere, including here in Southern California. These market forces would help the CVP avoid tighter government control while becoming part of California's long-term water solution.

I am very grateful to the many Californians who appeared at the Subcommittee's hearing two years ago in Sacramento and who have continued to advise us. Many of those witnesses are with us again today, and I have spoken with a number of the people in this room in recent days. I want to make sure you and the California water community understand that, while I am determined to enact legislation to address fully the CVP's environmental and water management problems, I remain open to your suggestions for better means to that end. I have no intention of discouraging local problem solving or the types of negotiations which are now underway between agricultural, urban, and environmental interests. Indeed, I hope to encourage these negotiations and, above all, to prevent the worst-case scenario, which would be for a Federal or State court to be left with no alternative but to take away the autonomy of the CVP and its beneficiaries altogether.

We are fortunate today to be joined by some of this State's most experienced and thoughtful water policy experts. I am grateful that they have taken the time to assist the Subcommittee in preparing this essential legislation. I look forward to a constructive and productive hearing.

II

102D CONGRESS
1ST SESSION

S. 484

To establish conditions for the sale and delivery of water from the Central Valley Project, California, a Bureau of Reclamation facility, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 26 (legislative day, FEBRUARY 6), 1991

Mr. BRADLEY introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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A BILL

To establish conditions for the sale and delivery of water from the Central Valley Project, California, a Bureau of Reclamation facility, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Central Valley Project Improvement Act".

SEC. 2. PURPOSES.

The purposes of this Act shall be to promote and expand the authorized purposes of the Central Valley Project, California, by establishing conditions which must be satisfied before the Secretary of the Interior may sell or deliver water from the Central Valley Project under contract or other agreement, and for other purposes.

SEC. 3. DEFINITIONS.

As used in this Act—

(a) the terms "Central Valley Project" or "project" mean all Federal reclamation projects located within or diverting water from or to the watershed of the Sacramento and San Joaquin rivers and their tributaries as authorized by the Act of August 26, 1937 (50 Stat. 850) and all Acts amendatory or supplemental thereto, including but not limited to the Act of October 17, 1940 (54 Stat. 1198, 1199), Act of December 22, 1944 (58 Stat. 887), Act of October 14, 1949 (63 Stat. 852), Act of September 26, 1950 (64 Stat. 1036), Act of August 27, 1954 (68 Stat. 879), Act of August 12, 1955 (69 Stat. 719), Act of June 3, 1960 (74 Stat. 156), Act of October 23, 1962 (76 Stat. 1173), Act of September 2, 1965 (79 Stat. 615), Act of August 19, 1967 (81 Stat. 167), Act of August 27, 1967 (81 Stat. 173), Act of September 28, 1976 (90 Stat. 1324), and Act of October 27, 1986 (100 Stat. 3050);

(b) the terms "repayment contract" and "water service contract" shall have the same meaning as provided in sections 9(d) and 9(e) of the Reclamation

Project Act of 1939 (53 Stat. 1187, 1195) as amended;

(c) the term "Federal environmental laws" shall mean those Federal laws intended, in part or in whole, to restore, protect or improve the natural environment, including, but not limited to the following Acts as amended or supplemented: Act of July 3, 1918 (40 Stat. 755), Act of June 30, 1948 (62 Stat. 1155), Act of August 12, 1958 (72 Stat. 563), Act of October 2, 1968 (82 Stat. 906), Act of January 1, 1970 (83 Stat. 852), and the Act of December 28, 1973 (87 Stat. 884);

(d) the term "Refuge Water Supply Report" means the report issued by the Mid-Pacific Region of the Bureau of Reclamation of the United States Department of the Interior entitled "Report on Refuge Water Supply Investigations, Central Valley Hydrologic Basin, California" (March 1989);

(e) the term "Reclamation laws" means the Act of June 17, 1902 (82 Stat. 388), and all Acts amendatory thereof or supplemental thereto; and

(f) the term "Secretary" means the Secretary of the Interior.

SEC. 4. LIMITATION ON CONTRACTING.

(a) Except as provided in subsections 4(b) and 5(a) of this Act, the Secretary shall not enter into any contract or other agreement to sell or deliver water from the Central Valley Project on any basis or for any purpose other than fish and wildlife before—

(1) the provisions of subsections 6 (b), (c), (d), and (e) of this Act are met;

(2) the California State Water Resources Control Board concludes its current review of San Francisco Bay/Sacramento-San Joaquin Delta Estuary water quality standards and determines the means of implementing such standards, including any obligations of the Central Valley Project, and the Administrator of the Environmental Protection Agency shall have approved such standards; and

(3) at least one hundred and twenty days shall have passed after the Secretary provides a report to the Committee on Energy and Natural Resources of the Senate and the Committee on Interior and Insular Affairs of the House of Representatives explaining the obligations, if any, of the Central Valley Project with regard to achieving San Francisco Bay/Sacramento-San Joaquin Delta Estuary water quality standards as finally established and approved by relevant State and Federal authorities, and the impact of such obligations

on Central Valley Project operations, supplies, and commitments.

(b) In recognition of water shortages facing urban areas of California, and subsection (a) of this section notwithstanding, the Secretary is authorized to make available one hundred thousand acre-feet of Central Valley Project water for sale through water service contracts not to exceed twenty years in length to any California water agencies for municipal and industrial purposes. The Secretary shall provide public notice of the availability of such water and shall be available to receive offers for such water for a period not to exceed one week in duration beginning not less than sixty days after enactment of this Act. The Secretary shall make all such offers public immediately upon their submission to the Secretary. The Secretary shall accept the offers of the water agency or agencies offering the greatest monetary payments per acre-foot of water made available by the Secretary: *Provided*, That, the payments shall in no case be less than $100 per acre-foot of contractual commitment annually, the payments must at least cover all Federal costs associated with the proposed sale and delivery, delivery is feasible using existing facilities, the proposed use of the water shall be consistent with State law, and the sale is consistent with all applicable environmental requirements. All revenues collected by the Secretary from the contract or contracts authorized by this section, other than ordinary operation and maintenance costs, shall be covered into the fund established by section 7 of this Act and expended pursuant to that section.

(c) The Secretary may not renew any existing repayment or water service contract for the delivery of water from the Central Valley Project, other than contracts for fish and wildlife water supply purposes, for a period exceeding one year in duration until the requirements of subsections 6 (b), (c), (d), and (e) have been met, except that the Secretary may renew such contracts for periods not to exceed twenty years in length if:

(1) at least ten per centum of the water under the subject contract on the date of enactment of this Act or ten per centum of the average annual quantity of project water actually delivered to the contracting district or agency between 1985 and 1989, whichever is greater, plus an additional one per centum of such total contract amount or average annual delivered amount for each year or portion thereof that the renewal contract is extended beyond ten years in length, is dedicated for use by the Secretary annually for fish and wildlife purposes in furtherance of this Act's goal and objectives; and

(2) the Secretary shall have first analyzed the impact of such proposed contract pursuant to the Fed-

eral environmental laws and complied with applicable State environmental laws.

(d) Not later than two years after the date of enactment of this Act, the Secretary shall prepare a programmatic environmental impact statement analyzing the cumulative impacts of the potential renewal of all existing Central Valley Project water contracts, including impacts within the Sacramento, San Joaquin, and Trinity River basins.

SEC. 5. IMPROVED WATER MANAGEMENT AND CONSERVATION.

All Central Valley Project water service or repayment contracts for agricultural, municipal, or industrial purposes that are entered into, renewed, or amended under any provision of Federal Reclamation law after the date of enactment of this Act shall provide that:

(a) all water subject to the contract may be transferred, whether by sale, lease, exchange, donation, or other means consistent with applicable State law, to any other California water user or water agency, State agency, or private non-profit organization for project purposes or any purpose recognized as beneficial under applicable State law, regardless of price or duration; *Provided*, That the contract shall also ensure that no transfers shall be made in excess of the average annual quantity of project water actually delivered to the contracting district or agency between 1985 and 1989; *And provided further*, That 25 percent of the net proceeds resulting from the transfer shall be deposited in the fund established under section 7 of this Act or 25 percent of the water subject to the transfer shall be dedicated to fish and wildlife restoration, protection, or enhancement pursuant to recommendations of the California Department of Fish and Game;

(b) individual subcontractors or water users within the contracting district or agency shall be authorized to act as their own agents in effecting transfers to entities outside district or agency boundaries, and further provides that a proposed transfer by such subcontractor or water user shall be viewed as "mutually satisfactory" in accordance with the provisions of California Water Code Section 383(c), if:

(1) costs to the contracting district or agency, or to other subcontractors or water users within the boundaries of the district or agency, do not increase as a consequence of the transfer;

(2) the subcontractor or water user agrees to forego an equivalent amount of project water deliveries, including conveyance losses, to which it would otherwise have been entitled throughout the term of the transfer; and

(3) the transfer involves no more water than the amount consumptively used or irretrievably lost in its prior use;

(c) the contracting district or agency shall ensure that all existing groundwater pumps and surface water delivery systems within its boundaries are equipped with volumetric water meters within five years of the date of contract execution, amendment, or renewal, and that any new groundwater pumps and surface water delivery systems installed within its boundaries on or after the date of contract renewal are so equipped;

(d) the contracting district or agency shall:

(1) demonstrate its authority, either individually or as a member of an appropriate regional entity, to undertake such actions as may be needed to ensure that surface and subsurface agricultural drainage discharges generated within its boundaries meet all applicable State and Federal water quality standards; and

(2) commit to a program, either individually or as a member of an appropriate regional entity, through which surface and subsurface agricultural drainage discharges generated within its bound-

aries will meet all applicable State and Federal water quality standards;

(e) if the contracting district, agency, or appropriate regional entity fails to meet all of the commitments specified under paragraph (d)(2) of this section at any time during the contract period, the contract shall terminate at the end of that year in which the failure or failures occur and shall not be renewed for periods of more than one year in duration until the district, agency, or appropriate regional entity can demonstrate that such commitments have been, are being, and will continue to be met. The provisions of this subsection shall be in addition to any and all requirements, remedies, and sanctions which are otherwise provided under State and Federal law. Neither this subsection nor subsection (d) is intended to impair or diminish in any way legal obligation of the Secretary to provide drainage services.

SEC. 6. FISH AND WILDLIFE RESTORATION.

(a) In furtherance of and in addition to the purposes and provisions of the Act of August 26, 1937 (50 Stat. 844, 850) and all other acts supplemental thereto or amendatory thereof, and any provision of such Acts to the contrary notwithstanding, the Secretary is authorized and directed to operate the Central Valley Project so as to:

(1) protect, restore and enhance fish, wildlife, and related habitat affected by the project, and

(2) provide equitable treatment for fish, wildlife, and related habitat with the other primary purposes for which the Central Valley Project is authorized to be operated.

(b) The Secretary shall provide firm water supplies of suitable quality to maintain and improve wetland habitat on National Wildlife refuges in the Central Valley of California, the Gray Lodge, Los Banos, Volta, and Mendota state wildlife management areas, and the Grasslands Resource Conservation District in the Central Valley of California.

(1) Upon enactment of this Act, the quantity and delivery schedules of water for each refuge shall be in accordance with Level 2 of the "Dependable Water Supply Needs" table for that refuge as set forth in the Refuge Water Supply Report. Such water shall be delivered until the water supply provided for in paragraph (b)(2) of this section is provided.

(2) Not later than January 1, 2000, the quantity and delivery schedules of water for each refuge shall be in accordance with Level 4 of the "Dependable Water Supply Needs" table for that refuge as set forth in the Refuge Water Supply Report.

(c) In coordination with the Secretary of Commerce, State of California, appropriate Indian tribes, fisheries and conservation organizations, and the general public, the Secretary shall:

(1) develop and adopt a program to mitigate fully and expeditiously for damages suffered by anadromous fish populations on the Sacramento, San Joaquin, and Trinity rivers and their tributaries as a result of construction or operation of the Central Valley Project. Such program shall be implemented promptly by the Secretary and shall complement and be coordinated with other existing and future efforts by the Federal Government, State of California, and appropriate Indian tribes to restore, protect or enhance anadromous fish populations.

(2) develop, adopt, and implement a program to comply with the purposes and provisions of section 5937 of the Fish and Game Code of the State of California.

(d) The Secretary of Commerce, in coordination with the State of California, appropriate Indian tribes, and other appropriate public and private entities, shall investigate and report on all effects of the Central Valley Project on anadromous fish populations and the fisheries, communities, tribes, businesses and other interests and entities that have now or in the past had significant economic, social or cultural association with those fishery resources. The Secretary of Commerce shall provide such report to the Committee on Energy and Natural Resources of the Senate and the Committee on Interior and Insular Affairs of the House of Representatives not later than one year after the date of enactment of this Act.

(e) The Secretary shall develop a plan to fulfill the United States trust obligations with respect to the fisheries and water of the Hoopa Valley Tribe and all other affected Indian tribes or communities. The Secretary shall provide such plan to the Committee on Energy and Natural Resources and Committee on Indian Affairs of the Senate and the Committee on Interior and Insular Affairs of the House of Representatives not later than two years after the date of enactment of this Act.

SEC. 7. RESTORATION FUND AND TRUST.

(a) There is hereby established in the Treasury of the United States the "Central Valley Project Restoration Fund" (hereafter "Restoration Fund") which shall be available for deposit of donations from any source, revenues provided under subsections 4(b) and 5(a) of this Act, and funds provided under subsection (b) of this section. All such funds may be expended without further appropriation.

(b) The Secretary shall impose an operations and maintenance surcharge on all sales of project power and sales of project water for irrigation, municipal, and industrial purposes sufficient to generate annually $30,000,000 (October 1990 price levels) to be used to implement the fish and wildlife restoration goals of this Act. Such revenues shall be covered into the Restoration Fund.

(c) The Secretary shall contribute one-half of the revenues deposited annually in the Restoration Fund established under subsection (a) of this section to a Central Valley Project Restoration Trust (hereafter "Restoration Trust") established in accordance with subsection (d) of this section and operated in accordance with subsection (e) of this section.

(d) A Central Valley Project Restoration Trust shall be eligible to receive Federal contributions pursuant to subsection (c) of this section if it complies with each of the following requirements:

(1) The Trust is established by non-Federal interests as a non-profit corporation under the laws of California with its principal office in California.

(2) The Trust is under the direction of a Board of Trustees which has the power to manage all affairs of the corporation, including administration, data collection, and implementation of the purposes of the Trust.

(3) The Board is comprised of seven persons appointed as follows, each for a term of five years:

(A) three persons appointed by the Governor of California, two of whom shall possess superior credentials in the preservation and restoration of natural biological diversity;

(B) one person appointed by each United States Senator from California;

(C) one person appointed by the President Pro Tempore of the California State Senate who shall possess superior credentials in the preservation and restoration of natural biological diversity; and

(D) one person appointed by the Speaker of the California State Assembly who shall possess superior credentials in the preservation and restoration of natural biological diversity.

(4) Vacancies on the Board are filled in the manner in which the original appointments were made. Any member of the Board is eligible for reappointment for successive terms. Any member appointed to fill a vacancy occurring before the expiration of the term for which his or her predecessor was appointed is appointed only for the remainder of such term. A member may serve after the expiration of his or her term until his or

her successor has taken office. Members of the Board shall serve without compensation.

(5) The corporate purposes of the Trust are to select and provide funding for projects that protect or restore the best examples of Central Valley's biological diversity, its rare species, plant and animal communities, and large-scale natural ecosystems.

(e) A Central Valley Project Restoration Trust established by non-Federal interests as provided in subsection (d) shall be deemed to be operating in accordance with this subsection if, in the opinion of the Secretary, each of the following requirements are met:

(1) the Trust is operated to select and provide funding for projects that protect or restore the best examples of the Central Valley's biological diversity: its rare species, plant and animal communities, and large-scale natural ecosystems;

(2) the Trust is managed in a fiscally responsible fashion by investing in private and public financial vehicles with the goal of producing income and preserving principal as needed; and

(3) proceeds from the Trust are used for the following purposes:

(A) twenty percent per year will be provided to the California Department of Fish and Game to fund projects that identify, protect or restore the best examples of the Central Valley's biological diversity: its rare species, plant and animal communities, and large-scale natural ecosystems.

(B) Up to five percent of the costs of each project are used for preserve design or site planning to ensure that sites are selected for funding which are well-designed to maintain the long-term viability of the significant species and communities found at the site.

(C) Proceeds from the Trust may be used to complete land protection projects designed to protect biological diversity.

(D) Projects may include acquisition of land, water rights or other partial interests from willing sellers only, or arranging management agreements, registry and other techniques to protect significant sites.

(E) Ownership of land acquired with Trust proceeds will be held by the public agency or private non-profit organization which proposed and completed the project, or another conservation owner with the approval by the Board. The land will be managed and used for the protection of biological diversity. If the property is used or managed otherwise, title will revert to the Trust for disposition.

(F) Projects eligible for funding must be located within the Central Valley or in those areas affected by the operation of the Central Valley Project.

(G) At the discretion of the Board, Trust proceeds may be used for direct project costs including direct expenses incurred during project completion. Land project funding may also include the creation of a stewardship endowment subject to the following terms:

(i) up to 25 percent of the total fair market value of the project may be placed in a separate endowment;

(ii) the proceeds from the endowment will be used for the ongoing management costs of maintaining the biological integrity and viability of the significant biological features of the site;

(iii) Endowment funds may not be used for activities which primarily promote recreational or economic uses of the site; and,

(iv) The endowment for each site will be held in a separate account from the body of the Trust and other endowments. The endowments will be managed by the Trust Board but the owner or manager of the site may draw upon the proceeds of the stewardship endowment to fund management activities with approval of the board. Additional management funds may be secured from other public and private sources.

(H) Should the biological significance of a site be destroyed or greatly reduced, the land may be disposed of but the proceeds and any stewardship endowment will revert to the Trust for use in other projects.

(I) Proceeds from the Trust may be used for management of public or private lands, including but not restricted to lands purchased with Trust funds, except that only those management projects that result in the maintenance or restoration of statewide biological diversity are eligible for consideration.

(f) The Secretary shall use funds deposited in the Central Valley Project Restoration Fund, other than those transferred pursuant to subsection (c), to:

(1) implement the fish and wildlife restoration plans required by section 6 of this Act;

(2) restore damaged natural ecosystems on public lands and waterways affected by the Central Valley Project;

(3) acquire from willing sellers other lands and properties or appropriate interests therein located within the Central Valley with restorable damaged natural ecosystems and restore such ecosystems;

(4) provide jobs and sustainable economic development in the Central Valley in a manner that carries out the other purposes of this subsection;

(5) provide expanded recreational opportunities; and,

(6) support and encourage research, training and education in methods and technologies of ecosystem restoration.

(g) In implementing subsection (f), the Secretary shall give priority to restoration and acquisition of lands and properties (or appropriate interests therein) where repair of compositional, structural and functional values will:

(1) reconstitute natural biological diversity that has been diminished;

(2) assist the recovery of species populations, communities and ecosystems that are unable to survive on-site without intervention;

(3) allow reintroduction and reoccupation by native flora and fauna;

(4) control or eliminate exotic flora and fauna which are damaging natural ecosystems;

(5) restore natural habitat for the recruitment and survival of fish, waterfowl and other wildlife;

(6) provide additional conservation values to state and local government lands;

(7) add to structural and compositional values of existing preserves or enhance the viability, defensibility and manageability of preserves; and

(8) restore natural hydrological effects including sediment and erosion control, drainage, percolation and other water quality improvement capacity.

(h) The Secretary shall make no expenditures from the Central Valley Project Restoration Fund, other than those described in subsection 7(c), until such time as the Governor of California certifies to the Secretary that the State of California has made an irrevocable commitment to implement in a timely fashion the recommendations for State action presented in the report prepared by the Resources Agency of the State of California entitled Upper Sacramento River Fisheries and Riparian Habitat Management Plan (January 1989).

SEC. 8. ADDITIONAL AUTHORITIES.

(a) The Secretary is authorized to promulgate such regulations and enter into such agreements as may be necessary to implement the purposes and provisions of this Act.

(b) Electrical energy used to operate and maintain facilities developed for fish and wildlife purposes pursuant to this Act, including that used for groundwater development, shall be deemed as Central Valley Project power and shall be repaid by the user in accordance with Reclamation law and at a price not higher than the lowest price paid by or charged to Central Valley Project contractors.

(c) In order to carry out the purposes and provisions of this Act, the Secretary is authorized to obtain water supplies from any source available to the Secretary.

(d) The Secretary is authorized to enter into contracts pursuant to Reclamation law and this Act with any California water user or water agency, State agency, or private non-profit organization for the impounding, storage, carriage, and delivery of Central Valley Project water for domestic, municipal, industrial, fish and wildlife, and any other beneficial purpose.

(e) The Secretary, in consultation with the State of California, is authorized to enter into agreements to allow project water contractors to use project facilities, where such facilities are not otherwise committed or required to fulfill project purposes or other Federal obligations, for supplying carryover storage of irrigation and other water for drought protection, multiple-benefit credit-storage operations, and other purposes. The use of such water shall be consistent with and subject to applicable State laws.

(f) The Secretary shall:

(1) permit project water contractors to reduce their payments for water made available by the Secretary but not taken by the contractor during a water year by the amount of any avoided operations and maintenance costs; and

(2) set operations and maintenance charges so as to create a reserve to assure annual repayment of operations and maintenance costs in those years where contractors do not take or pay for their full allotment.

(g) In addition to the duties and authorities contained in section 210 of the Reclamation Reform Act of 1982, and in furtherance of the purposes and provisions of that section, the Secretary shall establish and administer an office on Central Valley Project water conservation best management practices that shall, in consultation with the Secretary of Agriculture, the California Department of Water Resources, and California academic institutions, develop criteria and standards for evaluating the adequacy of all water conservation plans developed by project contractors, including those plans required by section 210 of the Reclamation Reform Act of 1982.

(1) Criteria and standards developed pursuant to this subsection shall be established within six months following enactment of this Act and shall be reviewed periodically thereafter, but no less than every three years, with the purpose of promoting the highest level of water use efficiency achievable by project contractors. The criteria and standards shall include, but not be limited to the following practices, or alternatives to the following practices which will provide equivalent net water use reductions or other conservation-related benefits:

(A) metering of water to all customers;

(B) elimination of declining block rate schedules from any system of water delivery or drainage/wastewater treatment charges;

(C) establishment of water rates and charges that yield not more than 25 percent of water service revenues from fixed charges unrelated to customer's metered water use;

(D) a program of leak detection and repair that provides for the inspection of all conveyance and distribution mains, and performance of repairs, at intervals of three years or less.

(2) The Secretary, through the office established under this subsection, shall review and evaluate within 18 months following enactment of this Act all existing conservation plans submitted by project contractors to determine whether they meet the conservation and efficiency criteria and standards established pursuant to this subsection.

(3) If at any time a contractor's conservation plan does not meet the criteria and standards established pursuant to this subsection, the Secretary may provide the contractor six months to revise the plan and commence implementation of such revised plan. In the event of further noncompliance with such criteria and standards, the contractor shall pay a surcharge on its water service charges or repayment obligations of 20 percent during the first year of non-compliance; 40 percent during a second year of noncompliance; and 50 percent during a third year of noncompliance. After a second successive year of noncompliance, no new loan, grant, guaranty, insurance, payment, rebate, subsidy, or any other form of direct or indirect Federal assistance, nor any Federal permit may be made available or issued under authority of Federal law during the period of noncompliance for the purpose of developing, acquiring (including by exchange), or conveying water for the

benefit of such contractor. After a third successive year of noncompliance by a contractor, the Secretary shall declare the water committed under contract to such contractor to be not beneficially used for the purposes of implementing and enforcing section 8 of the Reclamation Act of 1902 (32 Stat. 390). All revenues generated by sanctions authorized under this section shall be covered into the fund established under section 7 of this Act. All water found by the Secretary to be not beneficially used pursuant to this section shall be managed by the Secretary for fish and wildlife purposes.

(4) In developing the water conservation best management practice criteria and standards required by this subsection, the Secretary shall take into account and grant substantial deference to the recommendations for action proposed in the Final Report of the San Joaquin Valley Drainage Program, entitled A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley (September 1990).

(h) The Secretary is authorized to provide financial assistance to Central Valley Project irrigation contractors who have renewed their contracts with the Secretary pursuant to the terms of subsection 4(c) of this Act for the purpose of implementing cost-effective water conservation projects and measures to facilitate the reduction of project water deliveries required by subsection 4(c) of this Act. The Secretary may provide up to one-half of the costs of implementing such projects and measures as are required to achieve a savings of at least ten percent of the water under the subject contract on the date of enactment of this Act or ten percent of the average annual quantity of project water actually delivered to the contracting district or agency between 1985 and 1989, whichever is greater, plus an additional savings of one percent of such total contract amount or average annual delivered amount for each year or portion thereof that the renewal contract is extended beyond ten years in length, up to a total Federal share of $100 per acre (October 1990 price levels). At the discretion of the Secretary, such assistance shall be made available by direct payment or adjustment of water prices paid by the contractor over the term of the renewed contract, or through a combination thereof. Such assistance is subject to the following conditions:

(1) the renewed contract shall have been executed not later than March 1, 1994;

(2) the water conservation projects or measures shall be contained in a water conservation plan approved by the Secretary pursuant to subsection (g) of this section; and

(3) all water users within the jurisdiction of the contractor shall be in full compliance with the Reclamation Reform Act of 1982, as amended.

(i) This Act does not and shall not be interpreted to authorize construction of water storage facilities.

(j) Contract modifications required solely to implement the provisions of this Act shall not subject project contractors, including exchange contractors, to the provisions of the Reclamation Reform Act of 1982 (96 Stat. 1263).

(k) Not later than October 1 of the first full fiscal year after enactment of this Act, and annually thereafter, the Secretary shall submit a detailed report to the Committee on Energy and Natural Resources of the Senate and Committee on Interior and Insular Affairs of the House of Representatives. Such report shall describe all significant actions taken by the Secretary pursuant to this Act and progress toward achievement of the purposes and provisions of this Act. Such report shall include recommendations for authorizing legislation or other measures, if any, needed to implement the purposes and provisions of this Act.

SEC. 9. CITIZEN SUITS.

(a) Except as provided in subsection (b), any person may commence a civil suit in his or her own behalf—

(1) against any person, including the United States or any other governmental instrumentality or

agency who is alleged to have violated, be violating or be about to violate any provision of this Act or regulation issued under this Act; or

(2) against the Secretary where there is alleged a failure of the Secretary to perform any act or duty under this Act which is not discretionary with the Secretary.

(b) No action may be commenced under subsection (a)(1) before 60 days after written notice of the violation has been given to the Secretary, and to any alleged violator of any such provision or regulation. No action may be commenced under subsection (a)(2) before 60 days after written notice has been given to the Secretary; except that an action under either subsection (a)(1) or (a)(2) may be brought immediately after such notification in the case of an action under this section respecting an emergency posing a significant risk to the well-being of any species of fish or wildlife or associated habitat. This paragraph is intended to provide notice to responsible parties where possible and does not affect the jurisdiction of the district courts. Where an action has been commenced without adequate notice to the Secretary, the district court may stay its proceedings to allow proper notice to be given, or make other appropriate orders to achieve the purposes of this subsection.

(c) The court may award costs of litigation (including reasonable attorney and expert witness fees) to any party other than the United States whenever the court determines such award is appropriate.

(d) The injunctive relief provided by this section shall not restrict any right which any person (or class of persons) may otherwise have under any statute or common law to seek enforcement of any standard or limitation or to seek any other relief.

(e) The district courts shall have jurisdiction to prohibit or prevent any violation of this Act, to compel any action required by this Act, and to issue any other order to further the purposes of this Act. An action under this section may be brought in any judicial district where the alleged violation occurred or is about to occur, where fish or wildlife resources affected by the alleged violation are located, or in the District of Columbia.

SEC. 10. CENTRAL VALLEY PROJECT TRANSFER ADVISORY COMMITTEE.

(a) There is hereby established the "Central Valley Project Transfer Advisory Committee," hereby referred to as the "Advisory Committee." The Advisory Committee shall be comprised of 16 individuals, appointed as follows—

(1) 8 appointed by the Governor of California, one to represent each of the following organizations and interests—

(A) California Resources Agency;

(B) California State Water Resources Control Board;

(C) Central Valley Project agricultural water contractors;

(D) Central Valley Project municipal and industrial water contractors;

(E) Central Valley Project power contractors;

(F) environmental organizations;

(G) waterfowl conservation organizations; and

(H) fishery conservation organizations.

(2) 1 appointed by the President Pro Tempore of the California State Senate;

(3) 1 appointed by the Speaker of the California State Assembly;

(4) 2 appointed by the Secretary of the United States Department of the Interior to represent individually the United States Fish and Wildlife Service and Bureau of Reclamation;

(5) the Inspector General of the Department of the Interior or his or her designee;

(6) the Administrator of the Environmental Protection Agency or his or her designee;

(7) the Comptroller General of the United States or his or her designee; and

(8) 1 appointed by the Hoopa Valley Tribe.

(b) The Advisory Committee shall prepare a report to Congress and the President on all issues associated with transfer of all Central Valley Project facilities and assets to the State of California. The Advisory Committee shall provide recommendations on legislative and administrative measures required to execute such transfer which would ensure that—

(1) the fish and wildlife protection and restoration goals of this Act are achieved;

(2) the reserved fishing and water rights of affected Indian tribes are preserved, and the ability of the United States to meet its trust obligations with respect to such tribal assets is maintained;

(3) the Secretary's contractual obligations and rights associated with the Central Valley Project are fulfilled;

(4) the operations of the Central Valley Project and the California State Water Project are integrated to the maximum extent practicable; and

(5) Federal expenditures associated with the Central Valley Project are minimized.

(c) The Advisory Committee shall be co-chaired by the Inspector General of the United States Department of the Interior and any individual selected by the Governor of California from among the Advisory Committee members appointed by the Governor of California pursuant to paragraph (a)(1) of this section.

(d) Except as provided herein, the terms and provisions of the Federal Advisory Committee Act, Public Law 92–463, as amended (5 U.S.C. App. 2), shall apply to the Advisory Committee.

(e) The Secretary of the Interior shall provide the Advisory Committee with adequate quarters and staff, and will make funds available to meet the Advisory Committee's necessary expenses.

(f) The Advisory Committee shall meet at the call of the co-chairs and, in any event, not less than once every three months following enactment of this Act.

(g) The Advisory Committee shall submit the report as required by subsection (b) of this section not later than December 31, 1993. The report shall be submitted to the President of the United States, the Committee on Energy and Natural Resources of the Senate, the Committee on Appropriations of the Senate, the Committee on Interior and Insular Affairs of the House of Representatives, and the Committee on Appropriations of the House of Representatives. The Advisory Committee shall terminate 90 days after submission of such report.

SEC. 11. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act. Funds appropriated under this section shall remain available until expended.

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Senator **Bradley**. I am also very pleased to have as a member of this subcommittee a new Senator from California, Senator John Seymour, who is participating in today's hearing and I would like to recognize Senator Seymour for any statement.

STATEMENT OF HON. JOHN SEYMOUR, U.S. SENATOR FROM CALIFORNIA

Senator **Seymour**. Thank you, Mr. Chairman.

On behalf of my constituents, let me take this opportunity to welcome you to California, Mr. Chairman. I am pleased to join you today as one of California's senators, but also as a member of this Committee as we consider legislation you have introduced, S. 484, The Central Valley Project Improvement Act.

The fact that California is in its fifth and worst year of a drought is well known. It is the State's most pressing emergency and there is no real end in sight.

Clearly, there is no single solution to our drought crisis. And, unfortunately, unless mother nature blesses us with interminable rains, there are no quick fixes. Any solution must look to the future and the future reoccurrence of droughts.

Today, we will have our first opportunity to review S. 484, a measure you introduced, Mr. Chairman, which seeks to address the effect of the drought on California's fish and wildlife populations. I will comment on this proposal shortly.

But first, let me take a moment to share with the Committee, what I learned this past weekend and during recent visits to areas of my State, including entire communities that have been devastated by the drought. All agree that we must, as Californians from every walk of life, join hands to confront this problem head-on.

We must utilize water conservation techniques. We must all share what limited resources are available. We must all compromise for the good of the State.

Without this camaraderie and teamwork, without a consensus, each and everyone of us will lose today and will sacrifice our children's future for many years to come.

Absent a miracle that will procure massive quantities of new water, everyone concerned must focus on viable options to free up existing resources. That means balancing the needs of our families, our communities and our industries with the legitimate needs of our precious environmental resources, our fish and wildlife.

As a long-time California resident, this most recent drought tour has opened my eyes even further to the State's urgent needs. It has also raised some concerns.

Mr. Chairman, while I can understand the history which led to the introduction of this legislation, I must say that I have strong reservations about the approach the measure takes and the speed with which the Subcommittee is progressing.

I am not here to defend the Federal Bureau of Reclamation. I think the Bureau could be a lot more sensitive. I do think, however, that the Bureau has begun to realize that the West is changing and that it should be a partner helping us.

My basic concern with your legislation is that it substitutes the wisdom of the Potomac and control of the Federal Government for the political will of the citizens of the State of California.

California does not need the Federal Government to dictate how it should use its scarce water resources. However, much as I may agree with the particular objectives of this or any other legislation, once we have sold our birth right or had it stolen from us, it is gone forever and we will be at the mercy of the next generation of bureaucrats and special interests.

California is thirsty, I grant you that, but by no means is it incapable of administering its own water rights.

As I mentioned a moment ago, my constituents want to work together. They want to build a consensus for the good of all. While your measure provides some assistance, I am especially concerned that it diametrically opposes the teamwork we are so earnestly trying to foster. While the stated goals of S. 484 are to promote and expand the authorized uses of the Central Valley Water Project, the thrust of the measure insures that municipal, industrial and agricultural water users will be held hostage by efforts to enhance the environment for fish an wildlife purposes.

This marriage of Federal Government control with an environmental emphasis reminds me of the infamous *Rock Creek* decision, a matter with which I believe you are familiar, Mr. Chairman.

Briefly, when California sought to impose a flow regime on the Rock Creek Project for fish, as a result of its responsibilities under the water right which California granted the applicant, the Federal Energy Regulatory Commission (FERC), overruled the State and effectively preempted California's ability to protect its fisheries. Forty-nine other States, including New Jersey, joined with California and various environmental organizations in California's appeal to the Supreme Court. When we lost, Senator McClure and others introduced legislation which was drafted, in part, by California to overturn the decision. If the concern were really protection of fish and wildlife, that bill would have gone sailing through. This Subcommittee would not even grant a hearing despite a request from both Senator McClure and Senator Wirth, both members of the Committee, and the strong support from the National Governors and the States' Attorneys General; S. 484 again raises the question: Are fish and wildlife only important as long as the Federal Government gets to make the decisions?

Under this bill, it appears that States having already obtained CVP water rights under State law would now see the Federal Government preempt these very State laws to instead use the water for its own purposes, to satisfy the needs of a particular constituency which it happens to favor at the moment.

Somehow, this approach substitutes Federal bureaucrats in a role more appropriately suited to State and local planners and local users—again, the local consensus.

I do not envy the Governor his job, or the members of his fine team, David Kennedy and Doug Wheeler. The drought presses on all of us and they have the responsibility to craft the solutions. We in the Federal Government should stand behind them and be ready to assist. We should not dictate.

In this regard, I plan to introduce legislation this week upon my return to Washington that will do exactly that. I have met with the water users of this State and have crafted legislation to respond to their concerns. Specifically, my bill would do the following: Grant to the Secretary of Interior the authority to implement drought relief measures only after extensive consultation with the affected States; authorize the Secretary of Interior to work in cooperation with State agencies to establish water banks where Federal water and other supplies from the State can be bought and sold consistent with State law; allow the use of Federal facilities during drought periods to store and deliver non-Federal project water supplies for non-agricultural purposes such as municipal and industrial, recreational and for fish and wildlife; authorize the Secretary to purchase and facilitate the purchase of water on a willing-buyer, willing-seller basis; authorize the appropriation of funds to provide emergency loans for purchase of interim water supplies and for projects that conserve limited water resources; allow local water users to defer payment on Federal water loans until the drought crisis is alleviated; authorize the appropriation of Federal funds to assist California in the construction of intrusion barriers at the mouth of the Delta; this will protect valuable Delta water from saltwater contamination.

In addition, recognizing the needs to protect our precious fish and wildlife resources during this State-wide emergency, I will also introduce this week a fishery protection bill and join as a cosponsor of Senator Craig's bill to overturn the infamous *Rock Creek* decision.

Once again, Mr. Chairman, what California needs is flexibility from the Federal Government. We need a Federal Government willing to work with us, to assist us, not preempt us.

In closing, as I mentioned, we are in the fifth year of a drought. The recent rains have helped but much more is needed and the end of the rainy season is quickly upon us.

Before we start reallocating the State's water at the Federal Government's behest, we should be addressing the west-wide drought in a manner that respects States' laws. I have tremendous confidence in the People of California and the ability of Governor Wilson and his administration to uphold and enforce the public trust.

Mr. Chairman, I have faith in the people of California and I know you believe that the Federal Government should have faith in them as well.

Mr. Chairman, you have generously agreed to hold a second hearing on these issues here in California. Today, we will benefit from a range of views and I look forward to working with you to ensure that those views not represented here today are indeed heard at our next public forum. Let us work together to craft the kind of emergency relief that the people of California rightly deserve. Thank you.

Senator **Bradley**. Thank you very much, Senator Seymour, for your opening statement.

Now, we have a long list of witnesses and we want to hear what everyone has to say. In order to get through our list and try to keep on some schedule here, I would like, if possible, to have the witnesses limit their comments to from about 8 to 10 minutes and then we will have questions afterwards.

Our first witness is the Mayor of the City of Los Angeles. Mr. Mayor, thank you for allowing us to come into your fair City and hold a hearing. It is always a pleasure to see you. I know that your City has very real interests in this issue and we welcome you to the subcommittee. The floor is yours.

STATEMENT OF HON. TOM BRADLEY, MAYOR, LOS ANGELES, CA

Mr. **Bradley**. Senator Bradley, Senator Seymour, thank you for the opportunity to speak to the Subcommittee this morning. Welcome to Los Angeles. I assure you that you will hear a broad range of views on the issue of water in California and how we can better share it. There will be some conflict in our views, but I think we will find a common theme, time for change is here.

I believe that your efforts and certainly the bill that you have introduced, Senator Bradley, is going to move in that direction.

It is time for overhaul of the Federal Government's water policies as relate to the Central Valley Project. We need a fair resource balance to serve the needs of the urban areas of our State, the agricultural needs as well as the wildlife regions of California.

I do not regard this bill as an effort to impose the will of Washington on Californians. There is no consensus in California, unfortunately. We have delayed and when I say "we", I think that fault lies at every level of Government in every part of this State. There has been a failure to act, failure to respond. Hopefully, the bill which Senator Bradley has introduced will start a flow of other bills such as that mentioned by Senator Seymour. Hopefully, at the end of these hearings and the enactment of legislation, Californians will take the initiative and will find a common theme and consensus on this issue.

I recognize that that 5-year drought in this State provides an excellent opportunity and environment in which this Committee can meet. But as you, Senator Bradley have pointed out, the crisis is not the fault of just the lack of rainfall or snowfall. The problem is the failure to deal with many facets of this issue and going to the very foundation of how and why we must share water; how we must repair our basic plumbing facilities so that we can properly share. Thirdly, a will on the part of Californians elected as well as laid to deal with this issue.

I hope that this drought crisis which has been presented to us will find that before it ends that we have seized the opportunity taken up the challenge institute long-term forms which are badly needed. I also hope that Congress resists the temptation to react merely to the short term emergency.

Today, in Los Angeles, we are already into a mandatory water cutback of 10 percent. First of May, we will go to a 15-percent reduction. Our staff at the Department of Water and Power, has already told us that we will soon have to take 25-percent reductions in our use of water. We clearly recognize the need and we have taken the legislative action and the leadership position that I think is going to galvanize the people of this City into action.

It is my hope that every city in California is going to face this issue and do likewise. But, it is impossible for residents of Los Angles and other urban areas to overlook the apparent inconsistencies between drought policies being pursued by the State which largely places the needs of urban populations on a higher footing than the needs of agriculture. Drought policies pursued by the U.S. Bureau of Reclamation tend in the other direction. This Federal agency does not typically regard the residents of Los Angles, San Diego, San Francisco as its constituencies, even though it is our contributions as taxpayers that provide the funds that allow the Central Valley Project to sell water to its customers at prices far below is actual costs, our market value.

When we ask our citizens to cut back, they say they will do so. But they naturally ask, "What about agriculture? What about the farmers who use 85 percent of our State's water resources. Are they to pay next to nothing for it? Are they to cut back, too?" Fair question.

Indeed, it does appear inconsistent for cities to undertake, at some expense, water conservation and reclamation projects designed to provide permanent water savings while the Central Valley Project farmers grow subsidized crops that require flood irrigation.

The people of California want a rational water policy that will insure that there is enough water for our growing, urban populations for our precious fish and wildlife habitats as well as for agriculture. They want this policy to be crafted by their elected representatives and not by judges as a result of divisive and costly litigation and inaction by those who hold positions of authority in this State.

Senators, we greatly appreciate the effort you have made to undertake and understand our plight. Senator Bradley, we regard your bill as a hopeful sign that the needed change may be coming. I have asked our Department of Water and Power to analyze it and their analyses are reflected in the written testimony I have submitted.

To summarize our views, we support several sections of the bill, specifically, those that encourage conservation among agricultural contractors of the Central Valley Project and enable more extensive voluntary transfers of conserved water between contractors and other potential water users in California. We also view, favorably, the bill's attempts to restore the harmed habitats within the Central Valley Project area, specifically, view the proposed Central Valley Project Restoration Fund and Trust. The provisions of 100,000 acre feet of water from Central Valley Project from urban areas is of great interest to the cities in this State. Although we would ask your Committee to recognize the shortfall in the urban regions of both Southern and Northern California, it is a good deal larger than the 100,000 acre feet. The State water project alone is short more than 1 million acre feet.

Your bill, S. 484, embodies a message that fish, wildlife and the environment should be or would become a higher priority for the Central Valley Project. I support, of course, a greater environmental protection fish and wildlife improvement in this area. I do, however, believe that the emphasis that the bill puts on these values could be construed, unfortunately, as a diminishment of the value of water to growing urban centers. I would hope that that would be clarified. What we are all trying to accomplish is the effective use of the State's water resources to reliably meet the complete range of important water needs of the people of California—from our cities to our farms and our wildlife in our mountains, in our lakes and in our streams.

Finally, I think I speak for most urban users as well as defenders of wildlife in saying that our long-term goal would be elimination of water price subsidies. This would be a great help to our conservation goals and would go a long way toward assuring appropriate allocation of water. We also need the help of Congress in determining what additional facilities we can all support to correct some of the major plumbing problems in the State's water system so that water resources can be more efficiently used for all purposes. I would like to see the people most knowledgeable with the issues addressed by S. 484 work closely with you and your staff to assess the practical consequences of the legislation and to craft language that will improve on the framework you have given us for solving the State's water needs. It is certainly reassuring that, Senator, with the kind of respect which you bring to this issue and for your careful and thoughtful views about the matter and for your commitment to fairness will go a long way toward bringing about constructive change in this very important field.

Again, welcome to Los Angeles and thank you for your interest in this Project.

[The prepared statement of Mr. Bradley follows:]

PREPARED STATEMENT OF HON. TOM BRADLEY, MAYOR, LOS ANGELES, CA

Honorable Senator Bradley, my name is Tom Bradley and I am Mayor of the City of Los Angeles. I am pleased to welcome you to our city, and I am heartened and grateful that such an esteemed and important member of the United States Senate has come to Los Angeles to hear testimony from a broad range of officials who are concerned about water at this time of crisis.

Many different interests will come before you today to represent viewpoints on how water should be allocated in the State of California. You can expect to hear disagreements among them, but you will also recognize underneath these ages-old disputes a common theme: It is time for change. It is time for an overhaul of the federal government's water policies as they relate to the Central Valley Project, so that a fairer resource balance can be found to serve the needs of urban, agricultural and wildlife regions of California.

Clearly, the reason your committee has come to Los Angeles today is the high interest in water policy that the great drought of 1991 has occasioned. Believe me, after five consecutive dry years, I pray that this drought will end. However, I also hope that before it ends, we will have seized the opportunity that the drought has presented to us to institute the long-term reforms we need, so that next time the heavens run dry, policies will be in place to ensure that every city, every wildlife habitat, and every agricultural district has enough water to get by without having to experience the kind of environmental calamity and economic crisis that California faces this year.

I also hope that Congress resists the temptation to react merely to the short-term emergency. Although cooperative efforts to help relieve the drought would earn the federal government the gratitude of millions of Californians, the need for fundamental, long-term change is more important.

I believe that if the United States government, the state of California, and the regional and local water providers throughout this state, work together in a cooperative fashion, our larger goal can be achieved. All of us recognize that droughts cannot be controlled or avoided. But water shortages like the one we have now, are the results of policies that we can change. Let's not forget that as we proceed today.

Residents of the City of Los Angeles today are required by city ordinance to cut back water usage by 10 percent. In May, the required conservation will be 15 percent. Staff at our municipal water agency, the Department of Water and Power, have said there is a strong possibility that our conservation target will have to be raised to 25 percent shortly thereafter. This is all true despite the fact that our city is in a relatively good position compared with others in California who are more dependent on single sources of water, such as the State Water project, than we are.

It is impossible for residents of Los Angeles and all other urban areas, however, to overlook the apparent inconsistencies between drought policies being pursued by the state, which largely place the needs of urban populations on a somewhat higher footing than the needs of agriculture, and drought policies pursued by the U.S. Bureau of Reclamation. This federal agency does not typically regard the residents of Los Angeles, San Diego or San Francisco as its constituents, even though it is our contributions as taxpayers that provide the funds that allow the Central Valley Project to sell water to its customers at price far below its actual cost or market value. When we ask our citizens to cut back, they say they will do so, but they naturally ask, "What about agriculture? What about the farmers who use 85 percent of our state's developed water, and pay next to nothing for it? Are they cutting back, too?"

Indeed, it does appear inconsistent for cities to undertake, at some expense, water conservation and reclamation projects designed to provide permanent water savings, while Central Valley Project farmers grow subsidized crops that require flood irrigation. The rising cost of water, as well as the rising cost of sewage treatment, forces urban residents and businesses to be creative in finding ways to conserve. By contrast, the substantial federal subsidies combined with "use it or lose it" contracts act as a disincentive for conservation in the agricultural community.

The people of California cannot stand for this situation any longer. They want a rational water policy that will ensure there is enough water for our growing urban populations, for our precious fish and wildlife habitats, as well as for our agricultural breadbasket. And, they want this policy to be crafted by their elected representatives, and not by judges as a result of divisive and costly litigation.

Senator Bradley, we greatly appreciate the efforts you have made to understand our plight, and we regard your bill as a hopeful sign that the needed change may be coming. I have asked our Department of Water and Power to analyze it, and they have provided me with several comments which I will present to you today:

The legislation appears to have two purposes. One, as addressed in section 4(b), could provide quick assistance to help urban areas through our current drought. The second, and major part of the bill, is primarily to reform various parts of the central valley project law to provide for fish and wildlife restoration. Within those provisions are important changes addressing the state-federal relationship and agricultural water conservation.

I wish to highlight several concepts included in S. 484 that the City of Los Angeles can support:

Section 4(b) recognizes the serious drought facing California by making available 100,000 acre-feet from the Central Valley Project for urban areas. This also has the supplemental benefit of providing funding for fish and wildlife improvements. I would only ask your committee to recognize that the shortfall in the urban regions of both southern and northern California is a good deal larger than 100,000 acre-feet this year. The State Water Project alone is short more than one million acre-feet.

I would also like to highlight Section 5(a), which facilitates water transfers for any other purpose. I believe this will stimulate more voluntary and cooperative arrangements for more effective water uses, such as the Metropolitan Water District's historic agreement with Imperial Irrigation District. Section 4(c)(1), dealing with contract renewals, approaches this concept, however it limits the water supplies that would become available for fish and wildlife purposes. If this specific provision is retained, we believe it should be broadened to include urban uses.

Section 7 would establish a Central Valley Project restoration fund and a restoration trust. I believe these concepts could be a dramatic step forward in correcting the serious environmental harm that has been associated with the Central Valley Project. We would only urge that the detailed provisions be carefully evaluated from a broad range of perspectives to ensure they will be practical and smoothly implemented.

Sections 8(d) and 8(e) would provide flexibility in solving water problems by authorizing the secretary to contract with any California water user or agency for domestic, municipal, industrial, and any other beneficial purposes and to use Central Valley Project facilities in cooperation with the state of California.

Section 8(g) is one of the most important parts of S. 484 because it deals with agricultural water conservation. This section, and section 4(b) justify quick action. If possible, I would urge that these sections be separated from the bill to achieve early approval by Congress. Section 8(h) assists in this effort by providing a funding mechanism. I can assure you that the urban water agencies stand ready to assist the federal government in cooperatives ventures like the Metropolitan Water District-Imperial Irrigation District example I mentioned earlier. As an aside, I was pleased to see this section specify that all Central Valley Project customers' water use would be metered, as I am convinced that awareness of water usage and water waste can serve as an incentive for conservation.

Section 10, dealing with the Central Valley Project Transfer Advisory Committee, could be a very positive approach. I would urge, however, that the transfer committee not be limited to the state of California. A joint powers entity might also be appropriate.

Beyond the foregoing provisions, we note that much of the remainder of S. 484 embodies a message that fish, wildlife, and the environment should be or would become a higher priority for the Central Valley Project. I would be among the first to urge substantial progress toward greater environmental protection and fish and wildlife improvement in this area. I do, however, believe that the emphasis the bill puts on these values could be construed, unfortunately, as a diminishment of the value of water to growing urban centers. What we are all trying to accomplish is the effective use of the state's water resources, whether controlled by the state or federal government, to reliably meet the complete range of important water needs of the people of California, from our cities to our farms to our wildlife in our mountains, lakes and streams.

I believe we need a federal role to constructively supplement ongoing activities. We need to build on things like the Coordinated Operating Agreement to improve conditions for fish and wildlife and water supply reliability. Some parts of S. 484 that I referred to earlier are steps in that direction.

I think I speak for most urban users, as well as defenders of wildlife, in saying that our long-term goal would be elimination of water price subsidies. This would be a great help to our conservation goals, and would go a long way toward assuring appropriate allocations of water. We also need the help of Congress in determining what additional facilities we can all support to correct some of the major "plumbing" problems in the state's water system, so that water resources can be more efficiently used for all purposes

I would like to see the people most knowledgeable with the issues addressed in S. 484 work closely with you and your staff to assess the practical consequences of the legislation and to craft language that will improve on the framework you have given us for solving the state's water needs. It is certainly reassuring to me that a Senator of your reputation for fairness, fiscal responsibility and environmental sensitivity, has undertaken such an effort.

I thank you once again for this opportunity to speak before your committee today. If the City of Los Angeles, the Department of Water and Power or myself personally can provide you with any assistance, please do not hesitate to call upon us. Please also enjoy your stay in Los Angeles.

Senator **Bradley**. Thank you very much, Mayor Bradley, for your testimony.

Mayor Bradley, let me thank you, again, very much for your testimony and just tell you how much I hope that we will be able to work with you in the weeks ahead and the months ahead as we fashion this piece of legislation.

It has often occurred to me what if there was, in the Los Angeles Basin somewhere, one of the largest oil refineries in the world that was built by the Federal Government prior to World War II and at that time had entered into contracts with certain motorists for 20 cents a gallon gasoline and those contracts were good for 40 years. They are up now. The question is: Should we renew those contracts again for 20 cents a gallon of gasoline? It is not an exact parallel, but there are some real parallels between that prospect—that circumstance and what prevails today in California water. I am sure that you would want to make sure that people who were paying

$1.60 or $1.70 were now given the opportunity to get some of that 20 cent a gallon gasoline or at least see that the 20 cent a gallon gasoline people pay a little bit more or have the right to sell it when they get it.

Not to belabor an analogy too much, let me just say, Mr. Mayor, I appreciate your testimony and look forward to working with you in the months ahead.

Mr. **Bradley**. Thanks, Senator.

Senator **Bradley**. Our next witnesses will be representing the State of California. We are very fortunate to have Doug Wheeler who is Secretary of Resources here today and he is accompanied by Mr. David Kennedy who is the Director of the Department of Water Resources and Peter Bontadelli, Director of the Department of Fish and Game. We also will have on the panel Mr. Charles Warren who is the Director of the California Lands Commission.

Please use the mikes with the black feet and make sure they are on.

Mr. Wheeler, welcome, pleased to have you.

STATEMENT OF DOUGLAS P. WHEELER, SECRETARY OF THE RESOURCES AGENCY, STATE OF CALIFORNIA, ACCOMPANIED BY DAVID KENNEDY, DIRECTOR, DEPARTMENT OF WATER RESOURCES; AND PETER BONTADELLI, DIRECTOR, DEPARTMENT OF FISH AND GAME

Mr. **Wheeler**. Thank you very much, Senator. Good morning, Senator Seymour, as well. Thank you for this invitation to testify and welcome again to California. I am joined, as you have already indicated, by Pete Bontadelli who is the Director of the Department of Fish and Game and David Kennedy who is the Director of Department of Water Resources.

Rather than to read my prepared statement, I will submit that for the record, Senator, as you have requested and present a brief oral summary and would be happy to respond to your questions as appropriate.

Let me begin my statement by bringing you and Senator Seymour up-to-date about current conditions which have heightened interest in water supply here and which have attracted the attention of most of us at the State level for these past 3 months.

Despite the threat of rain today or apparently inclement weather here in Los Angeles, the drought remains a very important issue for us and is by no means resolved. As you probably know, the stationary high which had precluded the kinds of storms we would have liked to have seen in January and February has happily, if only temporarily, given way to a series of lows which have brought some relief to us during March, but not enough. It is probably a case, this year at least, of too little too late. In the L.A. Basin, at the moment, we have something less than half of the normal precipitation for this time of the year and State-wide in the State Water Project system, we have reservoir capacity that is at something like 40 percent of normal. Despite the fact that there has been a substantial improvement from February, we are nowhere near an average or normal year. Therefore, we remain very much concerned about the drought and about State efforts to ameliorate the drought.

I appreciate your recognition of the fact that the Governor has devoted diligent and, we think, effective, attention to this problem. He did so initially by the appointment of a drought action team on which all three of us participate and that team has established two priorities, Senator, for dealing with the drought at the State level.

First, conservation of existing supplies as has already been suggested by Mayor Bradley. Water districts throughout the State have been required to develop rationing plans which would reduce consumption in the M&I uses by as much as 50 percent should that become necessary on an assessment of need at the close of the rainy season.

At the same time, we have made every effort to enhance supply, particularly for critical uses which are deprived this year of normal supply. The principle focus for that, as you know, is the establishment, for the first time, of a State water bank in which we hope to achieve, from willing sellers, in the neighborhood of 500,000 acre feet which would be used for a variety of purposes including carry over to next year in the event that we have a sixth year of this drought. Fish and wildlife populations and the restorations of degraded habitats, critical needs in agriculture and in the municipal and industrial areas.

I am pleased to say that California's farmers and other water users have responded quite favorably to the suggestion of this market-based approach. We have something like 100 contracts already committed, 140,000 acre feet in the bank and another 200,000 or so in prospect. I think there is very real possibility that we will meet or exceed our goal of 500,000 acre feet.

In addition to these two thrusts of conservation and enhancement of supply, the Governor has established a Drought Action Fund and within the week, has sent to our legislature a package of bills totally $107 million which represent an additional State commitment of resources to deal with the drought. First and foremost, financial and technical assistance in the delivery and the reclamation of water to those who need it most.

Second, an effort to maintain baseline populations of threatened fish and wildlife whose habitats have been degraded by the drought and then when the drought subsides, restoration of those habitats to the extent possible.

Third, an enhancement of our fire fighting capacity through the Department of Forestry and Fire protection whose assets an whose capabilities will be very much tested this season which promises, perhaps, to be the worst ever fire season in the history of California.

Finally, to buttress those foregoing activities, an expansion of the Use Conservation Corp by some 225 personnel to assist with the delivery of drought protection services.

I need to emphasize that all of what I have described and all that which is ongoing here in the State has been due to the development of a strong, cooperative relationship not only between State agencies, but between the State Government and the Federal Government who serve as members of the Drought Action Team, both in Sacramento and in Washington. I think, too, we are grateful to the administration and the Congress for its prompt response to our suggestion that the Federal Government has responsibility for its assets in California and for the consequences or the affects upon those assets of the drought.

As you know, the House has passed a $30 million supplemental appropriation for purposes of providing assistance to Federal programs in the west and now the Senate has passed a $20 million appropriation for the same purpose. I do not have to suggest which number we prefer, but we would like, very much, for the Congress to move quickly on this and to provide the much needed additional revenue that it represents.

While we have focused on the short-term crisis, as I have indicated, and we must do so, I believe, prior to the development of longer term water policies, it is important to recognize that some of what we have learned in the short term, I believe has implications for the reform and redevelopment of water policy in the long-term, some lessons, in fact, which may be useful to the Committee as you consider the provisions of 484.

Although we are not able to offer definitive comment today on all of the provisions, I would like to share with you just a few observations about it and about our experience and how they might relate to your interests as the Committee further develops this bill.

First of all, we applaud your emphasis on restoration of the fish and wildlife values of the Central Valley and, indeed, throughout California in all areas where they have been impacted by the drought. These are priceless resources whose very existence is threatened by the water supply system in some instances and by the drought in others, by the combination of factors which caused Director Turner and our own Director Bontadelli in quite severe terms.

We are pleased at early signs of recovery as the result of cooperative efforts taken by a variety of interests here in California to develop programs such as that which is already under way on the upper Sacramento River. That, you may be aware, was the result of State legislation and involvement of 25 or more individuals and organizations, each with an interest in this issue working cooperatively to develop a plan which is now in the process of being implemented. So, too, we have high hopes for a similar process already initiated pursuant to 1990 legislation in the San Joaquin River Valley. We would certainly applaud any redirection, if its needed, of the Central Valley Project to the protection of fish and wildlife resources, I have accepted as a given, that that has been one of its purposes as it has long been a purpose of the State Water Project. Whether or not funding earmarks are necessary to achieve that purpose, I think, is a matter better left to the Committee and the Federal Government.

The second principle that I would like to address is the question of the water bank. As I have already indicated, we believe this is a device which has very strong promise for delivery of voluntary contributions of water of those who have it in surplus or who are willing to sell it. Thus far, it is a market-based technique which seems to have worked quite well. As I have indicated, we have every reason to expect that we will achieve our target of 500,000 acre feet within the State water system and within the bank the Government has established.

Let me point, as well, to this question of short-term contracts which I know is a central feature of the bill. We are concerned about those, principally, because they may have the unintended affect, Senator, of depriving economic support to those communities you mentioned, the so-called resource dependent communities. One of our concerns in the establishment of the water bank, for instance, has been although farmers will benefit for payment to them for their water, many of the agricultural suppliers, the so-called second tier economy in agricultural communities will be adversely affected if these farmers do not farm this year or next. So, anything that interrupts the continuity of the agricultural process also has great potential, we think, to adversely affect the economies of agricultural communities. We need to be mindful of that.

Let me say we do agree with you and with S. 484 about the need to study, carefully, the integration of the State and Federal water systems. We have studied that issue in the past. It is extremely complex. It is technical as you are aware, but even as we attempt to cope with the drought this year, we have seen the necessity of providing some operational integration between those systems. We would certainly participate with you in a study to that end.

Finally, let me emphasize as Senator Seymour has emphasized, that there is very important need in California for the development of consensus about long-term water policy. We are encouraged by our experience in the drought that there exists at this present time—and I think you probably recognized it in something you said at the opening remarks, Senator—there exists at the present time a very small window of opportunity, an awareness on the part of all interests in California that these are very important issues. Important not just to 1991 or 1992, but to the entire future of the State, a willingness of those interests to sit down and talk productive and constructively for the first time in recent history about ways in which we might reform water policy in this State.

We support that initiative. We will continue to do everything we can to nurture that initiative and would certainly not want to see any legislative interruption in what we think is a very promising and hopeful progress.

Let me conclude just by saying that we look forward to working with you and the Subcommittee in the development of long-term policies which meet the needs of all Californians on this important issue of water supply and protection of our environment.

[The prepared statement of Mr. Wheeler follows:]

PREPARED STATEMENT OF DOUGLAS P. WHEELER, SECRETARY OF THE RESOURCES AGENCY, STATE OF CALIFORNIA

Mr. Chairman, members of the Subcommittee, my name is Douglas P. Wheeler. I am the Secretary for Resources for the State of California. With me today is David N. Kennedy, Director of the California Department of Water Resources, and Peter Bontadelli, Director of the California Department of Fish and Game. We appreciate your invitation to testify on behalf of Governor Wilson, and to discuss issues raised by S. 484 and other drought related and natural resources legislation.

First, I want to share with you some current developments concerning the drought, both because it is the dominant water issue in the state, and because I think we will learn lessons from it that will be helpful in dealing with some of the issues raised by the legislation in question.

We welcome your interest in the problems that the State of California faces as a result of the fifth year of a continuing drought. We further appreciate the bipartisan efforts of Congress and the Bush Administration to respond to California's current problems. The Federal Government had a major role in providing temporary emergency relief during the 1976-77 drought, and a comparable response is appropriate during the current drought cycle. We note that the House has already enacted a $30 million supplemental appropriation to fund Federal drought relief activity in California, and we urge the Senate to do so, as well.

So far, the month of March, 1991, has brought several winter storms. The stationary high pressure area that blocked normal winter storms during December, January and February—when California normally receives half of its average annual precipitation—has given way to a succession of low pressure areas that have allowed storms to bring much-needed rain to the State. However, as beneficial as this rain has been, it cannot break the iron grip of five years of drought. The disastrous effects of the drought will persist unless, during the remainder of the rainy season, California receives a number of storms unprecedented in its history. We cannot expect this. Governor Wilson has stated that much of the runoff from the storms to date should remain in reservoir storage as a "prudent reserve" in case of an unprecedented continuation of this drought.

Since he took office on January 7, 1991, Governor Wilson has given high priority to ameliorating the effects of the drought. He has stressed that water conservation is the responsibility of every Californian, stating that "There must be a fair and equitable sharing of the pain among all interests in the State."

Water is delivered to California's citizens by a large number of regional and local water management agencies. These agencies have responded to the drought with great cooperation and coordination of activities. Many have instituted strict water rationing programs, and almost all have developed such plans. The Governor's program recognizes that these agencies have the key role in distributing California's limited water supplies, and efforts by the state government will be most effective if they support and build on the activities of these local agencies—not supplant them.

On February 1, 1991, less that a month after taking office, Governor Wilson established a Drought Action Team to oversee and coordinate a response to the drought. The Action Team consists of all interested state and federal agencies. The Action Team reported to the Governor on February 15, 1991 with a number of recommended actions—among these are the following which now being implemented:

Water Bank. Governor Wilson has established a Drought Emergency Water Bank for 1991. Water for the bank is being sought through voluntary transactions from three sources: Purchase of water in surface storage reservoirs, pumping of extra ground water, and fallowing of agricultural lands. The State's efforts to purchase water from farmers—by fallowing land and/or pumping ground water instead of using their surface water—are going very well. Water in the bank will be allocated to meet four critical needs:

Carryover storage for 1992.
Protection of fish and wildlife and their habitat.
Urban and household uses.
Agricultural uses which cannot be met in other ways.

The Bureau of Reclamation has been cooperating with us in our efforts to establish the water bank, and the Bureau has been assessing the hardship needs within its own service area. Some of the water we plan to acquire is the "water rights" water the Bureau delivers to holders of prior water rights along the Sacramento River.

Drought Emergency Legislation. Governor Wilson has called an extraordinary session of the California Legislature to enact drought emergency legislation without delay; his proposal requests the appropriation of over $100 million for technical and financial assistance to local water management agencies; protection of baseline populations of threatened fish and wildlife and their habitats; enhanced capacity to fight forest fires this spring and summer; and an expansion of the California Conservation Corps in support of drought-related field activity.

Water Conservation. Governor Wilson has requested in the strongest possible terms that communities and water agencies develop water rationing plans which assume they would have only 50 percent of normal supply; most, if not all have prepared such plans for review by the Department of Water Resources.

Reclaimed waste water and grey water reuse. The California Department of Health Services has been directed to study temporary modifications to existing state standards to increase opportunities for safe uses of household grey water and reclaimed waste water during the drought.

I have described Governor Wilson's drought program in some detail, because I want to stress that it is comprehensive and timely. We have given priority to combating the immediate and urgent hardships which the drought has caused, and will continue to cause. Simply put, state, federal, and local officials are devoting most of their time to planning, assessing, and carrying out plans that meet the needs of the state during this drought.

While the drought undoubtedly has long-term implications, we believe that any present effort to address long-term issues must be tempered in light of the critical needs which remain to be addressed this year. Nonetheless, the lessons that we learn from this drought may help us to deal with the longer-term issues which are raised by the legislation pending before the committee.

As already noted, the Federal Government will be a major participant in meeting California's immediate critical needs, and we believe that enhancement of its drought relief authority should be a high priority of Congress and the Executive Branch. In addition to emergency financial assistance, the Department of the Interior should have the authority as soon as possible to:

Undertake construction and conservation activities to mitigate losses and damages from the drought;

Facilitate transactions between willing buyers and sellers of water;

Purchase water from willing sellers and deliver the water pursuant to temporary contracts;

Store and convey nonproject water;

Make water available from Reclamation Projects for protecting or restoring fish and wildlife resources; and

Participate in the construction of temporary barriers or facilities in the Sacramento-San Joaquin Delta to protect and improve water quality and protect fishery resources.

We share many of the concerns addressed by S. 484, and particularly the need to restore fish and wildlife resources in the Central Valley. The State of California is already at work with the U.S. Bureau of Reclamation on a number of projects to maintain and restore fish and wildlife resources.

The Sacramento River Fishery Restoration Program is a good example. Preparation of the Plan was directed by 1986 state legislation. The Plan calls for state-federal cost sharing to implement a number of strategies to restore and enhance the fisheries and riparian habitat of the upper Sacramento River. It is the result of groundwork in previous studies of state and federal fish and wildlife agencies, and lengthy negotiations (1986-1989) among people representing 25 different public and private organizations.

These negotiations have provided a model for legislation enacted in 1990 which provides for resolving similar fishery problems on the San Joaquin River. An advisory council, similar to, but larger than the one which negotiated the Sacramento River Plan has been established. As with the Sacramento River, a variety of interests is represented on the advisory council. We are optimistic that consensus-building can achieve a success on the San Joaquin River, similar to that accomplished for the upper Sacramento River.

Clearly, there are a number of provisions in S. 484, which deserve mention today.

Our primary concern is that S. 484 addresses a number of major water policy issues that warrant consideration—and the development of solutions—in a timely, but more deliberate fashion.

As with wildlife restoration, California's efforts to achieve long-term solutions to our water problems have emphasized consensus building through public meetings and negotiations.

Californians are already working together to address the state's immediate water supply needs. Representatives from agriculture, environmental organizations, industry, metropolitan and rural areas have forged new cooperative working relationships. We recognize that changes in the water supply delivery system must be made. We are committed to insuring that all reasonable and beneficial uses of water are met, consistent with our equally strong commitment to environmental quality.

S. 484 could exacerbate tension between urban and agricultural water users, and thus undermine on-going efforts to resolve their differences. The current success of the water bank has underscored the possibility of market-driven water transfers, as opposed to mandatory reallocation. Our experience suggests that any successful long-term program for transfers of agricultural water to urban users will require substantial thought, detailed negotiations and immense voluntary cooperation between all parties.

Mr. Chairman, we have a unique opportunity and awesome responsibility before us. The flow and control of water has shaped the history of California, and it will be the key to California's future. A thorough technical and economic analysis must accompany any substantial revision of the way in which water is allocated in this state.

Let me also express concern with the provision of S. 484 which limits renewal of reclamation contracts to one year until long-term fish and wildlife and water quality concerns are met. As they come up for renewal, reclamation contracts are now subject to the requirements of the Reclamation Reform Act of 1986, which provide for consideration of the values addressed by S. 484.

We are especially concerned that such stringent limits on contract renewals may impose significant economic hardships on farmers, which, in turn, may result in severe economic hardships to agricultural communities in the Central Valley. All residents in these communities rely on the economy supported by agricultural production. A year-to-year renewal process for water supply would act as a significant disincentive to long-term investment in new technology, including improvements designed to enhance conservation. In implementing our water bank for the 1991 drought, we are paying particular attention to impacts on local communities which may result from only one year of fallowing land, and we propose measures to mitigate for these short-term impacts. Year-to-year renewal of reclamation contracts would have significant negative economic impacts on these communities.

We support a study of integrating the State Water Project and the Central Valley Project. The Department of Water Resources has considered this question in the past, and cautions that integration of these two systems involves extremely complex technical, economic, legal and policy issues that will take considerable study and effort to identify and resolve.

S. 484 seeks to assure a dependable water supply for the maintenance and improvement of wetland habitat on specified wildlife refuges. We share your concerns and believe that these refuges are an invaluable asset to the state and nation. They deserve special attention.

We share the concern addressed in S. 484 about the need for a long-term approach to restoration of fish and wildlife in the Central Valley. California has participated in a number of programs, including the Sacramento and San Joaquin Restoration Plans—already mentioned—which also seek to accomplish this objective. While the Central Valley Project is very large, about half the agricultural water used in the Central Valley is provided by local water projects. Thus, fish and wildlife restoration is a comprehensive issue involving a number of different suppliers and uses of water. It is not appropriate to place the entire burden of correcting all the fish and wildlife problems in the Central Valley on the CVP and its users. Again, this is an issue which requires consensus among the interested parties. California will actively participate in and support efforts to restore fish and wildlife in the Central Valley, as it has already made the maintenance of baseline population a priority.

In summary, we believe that there are a number of significant water issues raised in S. 484 which deserve to be carefully considered from the perspective of both the state and federal government, the resolution of which will benefit all Californians. We welcome the Subcommittee's interest, and pledge our full cooperation over the long term to the development of programs and policies which meet our shared objectives.

Senator BRADLEY. Thank you very much, Mr. Wheeler. Mr. Bontadelli and Mr. Kennedy are accompanying you——

Mr. WHEELER. They are and they would be happy to respond to your specific questions if you would like.

Senator BRADLEY. Mr. Warren.

STATEMENT OF CHARLES WARREN, EXECUTIVE OFFICER, CALIFORNIA STATE LANDS COMMISSION

Mr. WARREN. Chairman Bradley, Senator Seymour, my name is Charles Warren and I appear here this morning as the Executive Officer of California's State Lands Commission, also on behalf of its Chairman, Lieutenant Governor Leo McCarthy.

I think I should point out that the State Lands Commission is composed of three members—the Lieutenant Governor, Leo McCarthy; the State Controller, Gray Davis; and the Director of Finance, Thomas Hayes. While it is a member of the Executive Branch of

Government, it does not speak for Governor Wilson's administration.

Now, the State Lands Commission has the responsibility of managing the State's sovereign land holdings including all tide and submerged lands, bays and estuaries, navigable rivers, streams and lakes.

The agency, in performing its management of the waterways of the State, seeks to do so in conformance with the Public Trust Doctrine. This doctrine is firmly rooted in the laws of the State as a result of common law and a series of judicial decisions by the State Supreme Court and other appellate tribunals. It is the foundation of legal actions to which our agency is a party concerning Mono Lake and the American River. In both of these actions, the courts have ordered water to be allocated to protect public trust resources. The doctrine is also the principle underlying our current investigation of the condition of public trust resources in the San Francisco Bay Delta Estuary.

As the California Supreme Court recently said in its *Audubon* v. *Los Angeles of Water and Power* decision: "The common law doctrine of the public trust is an affirmation of the duty of the State to protect the people's common heritage in streams, lakes, marshlands and tidelands."

The Court in *Audubon* explicitly held that the exercise of water rights was subject to the doctrine. The heritage which the doctrine obliges the state to protect on and along its waterways include, among others, such resource values as public access, commercial and recreational navigation, fisheries, water oriented recreation, wildlife and open space.

Any objective survey of the State's waterways would reveal the extent to which governmental programs and policies to date have failed to protect these public trust resources.

Biological indicators of such failure indicate the fact that of 29 kinds of fish which were native to the Sacramento/San Joaquin Delta, eight are now considered Species of Special Concern by the California Department of Fish and Game and two are extinct within the area. Today, the once mighty San Joaquin River, which feeds into the San Francisco Bay Estuary, no longer supports spawning salmon.

The riparian forests which at one time blessed our rivers and streams, providing essential habitat to wildlife and numerous and immeasurable values to humans, have been destroyed. Only 5 percent remain today.

And along these waterways and wetlands, waterfowl populations are being wiped out. Unfortunately, I could go on.

The legislation, you, Senator Bradley, and others are sponsoring is a welcome effort to reverse this sorry and deplorable record. It offers a most timely opportunity for State and Federal agencies to work together to restore and enhance the public trust resources and values of the great waterways of our State. You are to be commended for your efforts and breadth of vision.

I have two suggestions for inclusion in your legislation.

First, the Secretary of Interior should be given a clear direction to protect the public trust resources of the State's waterways in the operations of the Federal Central Valley Project. This could be done by amending subsection 6 of paragraph (a) by inserting the phrase "and other public trust resources" after the word "habitat" as it appears in both sub paragraphs (1) and (2) of that subsection.

Second, the program which the Secretary of Interior is directed by your legislation to adopt and implement should include as an area of concern the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and the program should include compliance with the State's Public Trust Doctrine as well as the specific section 5937 of the Fish and Game Code. Accordingly, we recommend subsection 6 (c) subparagraph (1) be amended by substituting for the first sentence thereof the following: "(1) Develop and adopt a program to mitigate fully and expeditiously for damages suffered by anadromous and other fish populations in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and on the Sacramento, San Joaquin and Trinity Rivers and their tributaries as a result of construction or operation of the Central Valley Project."

In addition, subparagraph (2) of such subsection should be amended by inserting after the word "Code" the phrase "and the Public Trust Doctrine."

That concludes my presentation and I thank you.

Senator BRADLEY. Thank you very much, Mr. Warren.

Senator Seymour.

Senator SEYMOUR. Yes, thank you, Mr. Chairman.

Mr. Warren, you indicate in your testimony that any objective survey of the State's waterway would reveal the extent to which governmental programs and policies have failed to protect these public trust resources.

Mr. WARREN. Yes, sir.

Senator SEYMOUR. Are you referring to State programs?

Mr. WARREN. I am referring to both State and Federal, yes.

Senator SEYMOUR. Do you know of or has your office done such a survey of the Central Valley Project area?

Mr. WARREN. Insofar as it concerns the Delta, we are in the process at this moment of completing that survey, the report of which will be revealed fairly soon. I might point out that as a result of such concerns, the EPA along with other Federal and State agencies are in the third year of the San Francisco Bay Delta Estuary Project which has, as its purpose, the completion of several status and trends reports, the drafts of which show fully—and I think persuasively—the conclusions to which I allude in my statement.

Senator SEYMOUR. Prior to the completion of the survey?

Mr. WARREN. Yes.

Senator SEYMOUR. Mr. Warren, California——

Mr. WARREN. There is no question about it. I mean, let us just take the case of the San Joaquin Drain, for example, Senator Seymour. We have, as a result of excessive irrigation, as a result of both the State Water Project and the Central Valley Project, hundreds of thousands of acres that are becoming toxic as a result of selenium and other toxic chemical build ups. This is particularly on the west side of the San Joaquin. For several years, now, Federal and State agencies have studied what to do with it and the recent and final report concluded that there was not much that they could do with it. Meanwhile, hundreds of thousands of acres are being destroyed as a result of the policies and programs of both the Federal and State Governments.

Senator **SEYMOUR**. Mr. Warren, you are aware that the California State Legislature has established a task force to study ways to improve and restore the San Joaquin River System?

Mr. **WARREN**. Yes.

Senator **SEYMOUR**. Do you believe that Congress should await that study before enacting legislation?

Mr. **WARREN**. I, frankly, do not, Senator. I think although that effort is worthwhile and deserved, it applies to a specific segment of the problem. I think that the dimensions of the problem are of such magnitude that they need to be addressed comprehensively and not one sub-problem after another sub-problem as is the case with the San Joaquin.

Senator **SEYMOUR**. So, you believe we should move ahead even before your survey is completed or the California State Legislature has its task force report out, is that correct?

Mr. **WARREN**. Well, I think we should move ahead to the extent that evidence demonstrates the programs and policies can be improved to accomplish objectives which are important to society today.

Senator **SEYMOUR**. Thank you, Mr. Warren.

Mr. **WARREN**. You are welcome.

Senator **SEYMOUR**. Thank you, Mr. Chairman.

Senator **BRADLEY**. Thank you, very much, Senator Seymour.

Let me ask Mr. Wheeler, do you think any Central Valley Project water should be available for urban use?

Mr. **WHEELER**. I think that the Central Valley———

Senator **BRADLEY**. Start with an easy one.

[Laughter.]

Mr. **WHEELER**. I think that the Central Valley Project ought to have sufficient flexibility to meet the needs of all Californians, Senator.

Senator **BRADLEY**. So, would you support the 100,000 acre feet set aside that is embodied in S. 484?

Mr. **WHEELER**. We are not prepared to address specific provisions of law. That one, as I understand, has a quite specific purpose as well which is to start the fund for the Central Valley Restoration Trust.

I would suggest that the better approach is the one which we have started to take with the water bank, that is to gather a pool of sufficient size to meet the needs that we anticipate, including carry over and then to make allocations on an as needed basis, rather than to make specific ear marks in anticipation of the needs.

Senator **BRADLEY**. But in so doing, you would then permit the water that is in the water bank to be used for urban use?

Mr. **WHEELER**. That is certainly our intention with respect to the State water bank.

Senator **BRADLEY**. And would you advocate that we consider a similar water bank? We might look at what you have done as a model for what we might do with the Central Valley Project water? Would you advocate that we create a water bank in which some of the water could be used for urban use?

Mr. **Wheeler**. I would reserve judgment until we have had a bit more experience. We are 6 or 8 weeks into this when—and Dave has some updated figures which are even more encouraging than those which I provided to you—but, yes, in principle, we think that this market-drive approach is a sound one. I am not sure, while we are looking at the prospect of integrating the systems or talking about operating flexibility, we ought just now to establish a separate Federal water bank parallel to the State bank. But, give us some time with the State bank which I think shows great promise. Let us share with you those lessons then talk about ways in which we might integrate those needs and that experience.

Senator **Bradley**. Can you imagine any of the principles that are in operation in the creation of the State water bank, not to be in operation in the attempt to try to create a water market in the Central Valley Project area?

Mr. **Wheeler**. Well, the important exception and the one that gives us flexibility that the Feds lack, as you know, are the prior existing rights and contracts. That is a very important and not to be underestimated obstacle for the creation of a water bank at the Federal level.

Senator **Bradley**. So that not dealing with the public trust question—the public interest question, but for that part of the water supply that is not previously committed prior to the project's inception, you then would have—you see no difference in principle?

Mr. **Wheeler**. We have not encountered those kinds of obstacles.

Senator **Bradley**. Let me ask you—fish and wildlife are a real problem as you have said. You have a distinguished record on these issues. I have to think that that is one of the reasons you are so widely respected in your present position. Fish and wildlife major problems in the Central Valley. Would you advise us when we have 40-year water contracts that expire that we should attempt to use any of that—should we renew those for another 40 years without any consideration for the impact on fish and wildlife?

Mr. **Wheeler**. I think you have got to have consideration with the impacts of those contracts and the entire operation of the CVP on fish and wildlife values. I am not prepared to state whether a 40-year contract or a 1-year contract or a 20-year contract is the optimal means by which to achieve that. As I said, I think we would applaud any suggestion to the CVP that fish and wildlife values be made a part of its operating requirements just as we have attempted to do so with the State Water Project.

Senator **Bradley**. But, from your perspective, there is no magic to 40 years?

Mr. **Wheeler**. Not from my perspective.

Senator **Bradley**. The point is, you want a contract that is bankable, right?

Mr. **Wheeler**. Correct.

Senator **Bradley**. For the farmer?

Mr. **Wheeler**. In order to protect the integrity of the farmer's operation and the economic viability of those communities which depend on continuity of production.

Senator **Bradley**. And reasonable people would disagree as to what length of time is bankable.

Mr. **Wheeler**. You would have to ask someone more expert than I, yes, including the bankers, I would say.

[Laughter.]

Senator **Bradley**. Let me ask you, do you think that the CVP now allocates enough water to fishery protection to protect and restore Sacramento and San Joaquin salmon, striped bass and other stocks?

Mr. **Wheeler**. Let me ask Pete to describe the current effort in a minute, just to say that, obviously, those fisheries which you have described are stressed. The stress is due to a number of circumstances, all of which are addressed by, we think, the quite progressive legislative programs which Senator Seymour described—the upper Sacramento effort which is now underway and the San Joaquin Valley effort. I disagree with my good friend, Charlie Warren, to this extent: those two projects, of course, comprise the Central Valley Habitat at its largest extent and, therefore, I would like you to provide a quite adequate protection if and when effective plans can be developed. But, I would like Mr. Bontadelli to elaborate a bit if he could, on that.

Mr. **Bontadelli**. There is little doubt that the current utilization of the water in the Sacramento does not always function most efficiently for fish and wildlife. That is the reason there is currently a joint study underway with the Bureau of Reclamation, Department of Water Resources, ourselves and the Fish and Wildlife Service on an IFIM in-stream flow to try to determine the precise levels at right times of year.

This year, on some of the originally proposed operating schedules, it became very clear that we had a potential for significant problems with the winter run and perhaps the fall run as well. We are currently in the process of negotiating that and I believe, if we can use this water bank storage behind Shasta in a joint effort, we can probably have positive impacts that can ameliorate most of those problems and concerns this year, provided that Shasta is the primary storage facility for both the State and Federal water.

Senator **Bradley**. So, you see no need for any similar effort or any attempt by the Central Valley Project to free up any water for fish and wildlife?

Mr. **Bontadelli**. There are several sections in your bill and others which indicate that a mechanism using the marketplace may be an effective tool to accomplish that with some reserve. In addition, much of the problem is operating regime and, occasionally, that operating regime is driven more by power than by water demands and needs so that has to be taken into account. Frequently, it is not the amount of water, it is the delivery and timing of it.

Senator **Bradley**. Mr. Kennedy, do you have any comments on this?

Mr. **Kennedy**. I just might bring you up to date on the number that he mentioned in our water bank now, we have between 250,000 and 300,000 under contract and we have another 250,000 with conceptual agreement that we are working on contract language. So, we essentially have 500,000 and we are going to try to build up beyond that.

Senator **Bradley**. Does salmon have adequate water now, Mr. Bontadelli?

Mr. **Bontadelli**. I do not think there are very many streams where we have an agreement that the flows are sufficient at the current time.

Senator **Bradley**. So, we need more water?

Mr. **Wheeler**. We all need more water. In fact, there is a consultation cited, as you know, underway relative to the winter run of Chinook salmon and that is a matter between the Central Valley Project and the National Marine Fisheries Service.

Senator **Bradley**. Would it be helpful to your efforts if the Congress were to give clear, new direction and new authority to mitigate fully the CVP's fish and wildlife damage?

Mr. **Wheeler**. Yes, to the extent that it is now lacking, I think that would be helpful.

Senator **Bradley**. Let me recognize Congressman Rick Lehman who is joining us in an unusual Senate hearing that will have a House Member sitting on the panel. I am sure that he will add to our hearing. Congressman Lehman.

Mr. **Lehman**. Thank you very much, Mr. Chairman. I appreciate the introduction. Senator Seymour, it is good to see you. I do have statements that I will make at the appropriate time.

I just cannot miss the opportunity, right now, to bring something up that clicks in my mind. It is so good to see Charles Warren, who I do not think I have seen in a long time. We served a lot of months together in the State Assembly and then he went off to Washington. I remember Charles Warren as the person who fought the hardest in California to protect agricultural land even though he came from an urban district. He carried very tough legislation in that regard and in the past. When I went to the Legislature following you, I attempted the same kind of legislation and met with much the same result. Now, I guess the verdict is in on that; we lost. Agricultural amnesty converted to urban uses left and right all over the State at a record pace. That is directly related to what we are talking about here with this film. I do not think we can take the things that we are talking about out of that context.

I would like to ask Mr. Kennedy, in that regard—maybe Mr. Wheeler can help me, but I suspect Mr. Kennedy—we hear this number bandied about that agriculture consumes 85 percent of the water in California. I would like to know if that figure is accurate, number one.

Number two, what is the trend out there as far as use is concerned? It would occur to me that since urban areas are growing, that that is coming at the expense of agricultural areas and it ought to be shifting in the other direction, is that true?

Mr. **Kennedy**. Yes, it is, Mr. Lehman. In fact, it has gone from 85—at the present time, it is about 80 percent of the developed water in the State that is used for irrigated agriculture and just year by year it is decreasing because irrigated agriculture is not increasing and, of course, urban uses are increasing. So, when we calculated it again, 2 years ago, it was roughly 80 percent and over time, it will drop below that.

Mr. **Lehman**. So, agricultural land is converted to urban uses, the agricultural use of that water is no longer necessary for that purpose and a good portion is then being freed up for urban use?

Mr. KENNEDY. Yes, we figured that on a State-wide basis, roughly 35 percent of the increase in urban use is met by conversion of irrigated land to urban land. It is just a coincidence that an acre of irrigated land uses about the same amount of water as an acre of urban use.

Mr. LEHMAN. And, can you qualify that one more time? We are 30 million people today, we are going to be 40 million, say, by when, 2010? Have you looked at——

Mr. KENNEDY. That is probably as good estimate as any, right.

Mr. LEHMAN. And that should have a commenced—sometime the commensurate shift in water use as well?

Mr. KENNEDY. At some time, agricultural use will be down to 70 to 75 percent, right. It is still a predominant use.

Mr. LEHMAN. Thank you.

Senator BRADLEY. I just thank you all very much for your testimony. I think it was very helpful. You have already been helpful to us over the last several years and we will look to you for further guidance. Our hope is to work with you in trying to bring the Central Valley Project into some kind of symmetry with the State Water Project so that you will have the maximum amount of flexibility to allocate water within the State of California as you see fit. We will be attempting to do that and will be in consultations with you in the coming weeks.

Let me ask you just one or two questions before you get away.

Does it make sense to you that if we allow the sale of water from an existing holder to whoever is the highest bidder, whether it is the State or whomever, should the entity that sells the water be required to pay a tax on that sale of water? Let us say you hold the right to water at $6 an acre-foot and the average on urban use is $300 to $400 an acre-foot, or you maybe sell it even higher, do you think there should be a tax that could possibly be used to help some of the towns in the Central Valley that might have problems or help fish and wildlife, a whole variety of other potential uses for such a fund?

Mr. KENNEDY. I am sure, Mr. Chairman, you would not want to call it a tax.

[Laughter.]

Senator BRADLEY. No. We will call it whatever you want if you support it.

[Laughter.]

Mr. KENNEDY. As a practical matter in our water bank, we are discussing with local people the extent to which we can recognize some of the concerns that are faced beyond just the farmers themselves. We are actually buying water from farmers but we recognize that there are impacts that go beyond the individual farmer and we are trying to address that and I think that any successful long-range market program has to take into account the needs of the communities and the fish and wildlife values which you are addressing here.

Senator SEYMOUR. One last question, Mr. Chairman, thank you very much.

Relative to your previous question, I just make note, Mr. Chairman, that I have always believed that if you want less of something, tax it. If you want more of something, do not tax it.

My question to you, Mr. Kennedy, has to do with water rights. What is the nature of the water rights held by those who have been receiving Central Valley Project water in accordance with delivery contracts entered into with the Department of Interior. In your opinion, have they perfected a water right in accordance with State law?

Mr. **Kennedy**. I will first just make a statement that I am an engineer and not a water attorney, so, you should take my response with that consideration.

There are basically two types, I think, of what you could call water rights the Central Valley Project is dealing with. The longtime riparian or appropriated rights that were already there when the Central Valley Project came into being, most of which were settled out under contracts. They sat down—the Central Valley Project operators sat down with those farmers and water districts and actually worked out contracts that defined what their rights were. It is kind of a hybrid right between what they had and being firmed up by Central Valley Project storage. Those are basically the people that are getting 75-percent supply this year.

Then, you have another entire group of contractors who did not have water before the Central Valley Project. They received it as a result of CVP facilities. They have long-term contracts. We tend to think of that as a form of water right and I am sure that if somebody just tried to take it away from them, they would be in Court the next day with an assertion that is a form of water right.

Senator **Seymour**. Thank you.

Senator **Bradley**. If I could just follow-up on that. Whose job is it to place conditions on water rights in California?

Mr. **Kennedy**. Well, the State Water Resources Control Board is the principal authority.

Senator **Bradley**. Whose job is it to bar or prohibit water right transfers?

Mr. **Kennedy**. Unless I am missing the question, Mr. Chairman, I am not sure anybody has the responsibility to bar transfers.

Senator **Bradley**. Mr. Bontadelli?

Mr. **Bontadelli**. They must effectively be approved if it modifies point of diversion or point of use by the State Water Board.

Senator **Bradley**. Let me ask you this: Assuming the Federal Government can protect its investment in the Central Valley Project, should the United States put restrictions on the transferability of CVP water or is that really the State's job?

Mr. **Bontadelli**. Under current court cases, it would appear the decision rests with the State and the State Board in terms of that. The key is making sure that there is sufficient flexibility as your bill begins to propose within the operating regime of the CVP to allow that to occur and determining who actually holds the rights whether it is the district, the individuals and so forth and in that respect, some points in your bill may be usable too.

Senator **Bradley**. So that the parts of the bill that you referred to which relate to water management and conservation would, essentially clear up an ambiguity in stating quite directly that it is the State and it is the State law which will determine what is transferred?

Mr. **Wheeler**. Subject to prior existing contracts which the courts would no doubt have to interpret, yes.

Senator **Bradley**. And you would find that helpful?

Mr. **Wheeler**. Yes.

Senator **Bradley**. Okay. Well, let me thank the panel very much for your testimony. I appreciate it. Again, we will be in touch over the next several weeks.

All: Thank you, Senator.

Senator **Bradley**. Our next panel consists of legislators—California State Legislators and if—I do not know if Senator Roberti is here, but we have Assemblyman Jim Costa, Assemblyman Richard Katz, Assemblyman Bill Jones and Senator Roberti, I understand, is stuck in Fresno—Sacramento. We are sorry that he is not here.

I welcome all three of you to the Subcommittee and look forward to your comments.

Mr. Katz, would you like to begin?

STATEMENT OF RICHARD KATZ, ASSEMBLYMAN, CALIFORNIA LEGISLATURE

Mr. **Katz**. Senator, thank you very much. And, like others, I appreciate your being here today and I think this is an interesting trio because, I think, to some extent, we have common goals and different views. I think that will become clear as we make our comments.

The one thing that I think we all agree on is that California is pitifully overdue in rethinking and restructuring the way water in California is allocated, at both the State and Federal level, in a way that benefits all Californians, not just the privileged few. The traditional "use it or lose it" policy of the States which originated in the 1930's is totally out of touch with the reality of the 1990's.

The issue of reallocating California's water just is not a battle between the north and the south, corporate farms and family farms, urban and rural interests or between the haves and the have-nots. Rather, I believe, it is a struggle to find the political will to forge rational, progressive water policy that reflects California's current demographic, economic and environmental conditions.

With that in mind, I would like to mention a few facts:

In 1933, the Central Valley Project was launched. It has served agriculture well—especially the monolithic agribusiness conglomerates. Unfortunately, this perpetuation of policies conceived early in this decade has had a severe and detrimental effect on other vital regions in the State, including the Delta, San Francisco Bay, the North Coast and Los Angeles.

And, for what end? To deliver cheap water for subsidized crops and to continue a policy that has delivered, as I said, cheap water on subsidized crops that are used in only a small part of the State.

Federal policy makers chose to subsidize water in California to enrich California's economy and to enable farms to flourish, an idea that probably made sense at the time. When that policy decision was made, less than 6 million people lived in this State. Today, we are almost 30 million. By the end of this hearing, 1,000 more will be here. It is difficult to explain why in 1990 we are subsidizing the likes of the J.G. Boswell Corporation and the Salyer Land Company.

Never has Government done so much for so few for so long.

What possible justification is there that gives taxpayer dollars to rice growers in the amount of $7 for rice that costs $6 to grow and sells for $3. Where does most of this subsidized rice go? It goes out of the country. Who benefits from this type of arrangement? Those who grow cotton, rice and other water-intensive subsidized crops—people who farm their Federal IRS forms.

The politics of subsidizing water for subsidized crops no longer makes environmental, social or political sense and is totally contrary to sound economic principles. Consider that California agriculture consumes 80 percent of California's water. If the agriculture industry represents only 2½ percent of the State's economy. That is important because we hear talk of, is it 80 percent? Is it 85 percent? It is 80 percent, but it is 2½ percent of the economy.

Agriculture is an important element of the economy, but it is not the only one. A common sense approach is needed which reflects today's world, not yesterday's.

For almost a decade, Senator, I have been fighting to reform California's archaic and irrelevant water policies. Today, most of the tools are in place to allow State water to be traded to areas where it is needed most. However, unless we are in a crisis situation, few of them have been willing to use the tools.

Nine years ago, I wrote the law that puts California on record as promoting a free market in water without jeopardizing water rights. That legislation did what Government is supposed to do: Remove the barriers, level the playing field and get out of the way.

In 1986, I wrote the law that opened up the water pipes in the State, giving those who wanted to trade water access to the markets.

At each point, entrenched water bureaucracies and special interests fought the bills. Senator Bradley, they will fight your bill as well.

With the introduction of your bill, Senator, you have a unique opportunity to mobilize the political will regarding Federal water policy that has been sorely lacking. The CVP Improvement Act seeks to accomplish at the Federal level what I and others have been working to do at the State level.

It removes many of the barriers to Federal trading while protecting sensitive environmental and natural resources.

It allocates a portion of traded water for wildlife and fisheries restoration which is a vital step to mitigate environmental damage. It mandates that California's ground and surface water must be metered, an important tool to encourage conservation. It provides dollars to restore California's dwindling natural resources.

One note of caution, however, Senator, it has been my experience that when districts are given the right to either approve transfers or to determine when surpluses exist, nothing happens. Surplus is in the eye of the beholder. Most local water bureaucracies would rather supply so-called surplus water to users within their district, at extraordinarily cheap rates, that allow the State-wide marketplace to determine the best use of that water.

Senator, despite the recent rains, we are at a crossroads in California history. No longer are urban rate payers and taxpayers willing to be quiet doormats to large corporate farming.

In conclusion, Senator, I point out that last year, we, in Los Angeles, were forced to endure nightly bombardments of malathion for the good of agriculture. This year, we are being asked to flush less, shower less and cut back more so that large corporate farmers growing crops that we as taxpayers subsidize can maintain their profit margins.

Senator, enough is enough. It is time to let a truly free market work to the betterment of California's environment and taxpayers.

I want to thank you for giving me an opportunity and for your leadership in this area.

Senator **BRADLEY**. Thank you very much, Mr. Katz. Congressman Lehman has a pressing appointment and would like to make his brief statement now, if it is all right with the legislators.

Mr. **LEHMAN**. Thank you very much, Senator Bradley.

Mr. **KATZ**. Congressman, I do not mean to be rude. I am trying to catch a 10:55 out of Burbank.

Mr. **LEHMAN**. I will send you a copy of my statement.

Mr. **KATZ**. I would like to continue this discussion——

Mr. **LEHMAN**. I would like to clarify just one thing just for the record. The Salyer Land Company, with whom I have tremendous disagreements, well documented and known by the people, do not get any Federal water. They are entirely State water users so the extent there are abuses there, the State might look at those.

Mr. **KATZ**. That is a valid point. The point that we were trying to point out is in terms of subsidized crops that taxpayers pay for. I will continue the discussion with you at another time.

Mr. **LEHMAN**. But, you mentioned one specific company——

Mr. **KATZ**. I appreciate it.

Mr. **LEHMAN** [continuing]. That was inaccurate. They can still tell you they get no Federal water. I appreciate your testimony.

STATEMENT OF HON. RICHARD H. LEHMAN, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. **LEHMAN**. I want to say I really appreciate Senator Bradley's allowing me to come down here today and I guess you are going to learn about water and water politics in California. The San Joaquin runs through my district and whenever there is a discussion in Los Angeles about anything to do with a river in my district, I have to be here. I represent the district from the headwaters near Devil's Coast Mile down to Friant Dam all the way up to the rich farmland in Madera County and I also represent San Joaquin County where the river flows into the Delta. So, I am familiar with both ends of it am very concerned about the state of the river and firmly believe that some things need to be done and be done quickly to improve conditions for the benefit of everyone. I think everyone is suffering right now from conditions on the river, whether it is environmentalists, farmers, or urban users. It is a mess. It needs to be straightened out.

I have a lot of problems with the approach taken in this bill as I do with the approach taken in Mr. Miller's bill as well. I am very glad I got to hear your statement before I went into mine because I hear you speaking a lot differently than Mr. Miller and I do not mean this to be that many arguments over this—I do not hear the holier than thou attempts to portray farmers as some type of evil people at the Federal troth at every turn. I hear you focusing on the technical aspects of this and trying to solve a problem. I appreciate that.

I am no stranger to trying to protect rivers. I carried the legislation to protect the Tuolumne River in my district. That was successful. I carried legislation to protect the King's River and I carried legislation to protect the Mono Basin, the most important nesting area for birds on the Pacific flyaway. I think I meant as much, if not more, than any member of Congress over the past 10 years in that regard. I think in the heat of each one of those from my own constituents and many of them farmers and farm organizations, water users who vigorously opposed legislation which I successfully carried to protect our rivers.

I believe, as I have said, we have got to do much more in the San Joaquin. I have told farm and water groups repeatedly that more water must be allowed to flow in that river and that existing wildlife habitat must be protected and enhanced.

I know that some of the costs and inconvenience of doing that is going to have to be borne by my constituents. But, what I must resist is any attempt to portray them as the sole or even the primary culprit responsible for environmental degradation.

I think both your bill, Senator Bradley, and Congressman Miller's bill ignores the enormous momentum that is building in California at the local and State levels to work towards a consensus. It ignores the San Joaquin River Management Program. It ignores the legislative efforts to create a forum for negotiation and provide expertise and funding. It is very difficult for me to tell my constituents that they ought to stay at the table, negotiate, be willing to give things up when the Federal Government through Congressional Committees has undermined those efforts with independent initiatives and one-sided pieces of legislation.

I note from your statements, Senator Bradley, which I read, your approval of State water practices and your—you are very quick to commend the State for what they have done and express the desire the Federal Government should do the same and I think in one regard you are right. But, I do not think the first thing we ought to do in that vein is to go off and ignore what the State has done on the San Joaquin and do things that, in fact, fly in the face of the State effort to improve the San Joaquin and contrary to State policy. I think the State—what the State is doing is doing with one hand, it ought to be heeding here as well.

I have read the bill. The basic problems, it looks at this problem from a long way off rather than establish an atmosphere where all of the interested parties can discuss and negotiate the issue, it dictates a solution, picks out one suspect, in this instance, a farmer, and then proceeds to wipe them out. State water contractors, utility companies and land developers will love this approach, but not for environmental reasons. It takes water from someone else, uses it to mitigate the damages without requiring any burden on anyone else's part. Then when the farmer is out of business, those entities can get what is left of his water and go about their business.

I think the key part of this bill and the key part of Miller's bill is that portion which requires the Secretary to change water delivery schedules and requires them not to issue contracts longer than 1 year. While the Secretary figures out how to restore and enhance striped bass, increase the production of salmon steelhead, while he figures out how to protect, preserve, restore and enhance fish, migrating birds, waterfowl, endangered species—that is what the bill is about. It shuts off the water to farmers in the Central Valley while the Secretary and all the various Commissions go about trying to resolve those issues.

It will be absolutely impossible for a farmer to borrow money from the bank if he has got a 1-year contract for water. He is not a farmer any more. If the bank would loan him money, the FDIC ought to come in and close down the bank. You could not loan people money with a 1-year contract for water. Mr. Miller negotiated with me last year, extended that to 3 years—I know from the print, he just released his bill this year—he is back to 1 year. The farmer will not be able to farm, but the developer can still develop, the speculator can still speculate on our small streams with their hydro projects and the State Water Project can expand and take care of its obligations.

We all want to improve conditions on the San Joaquin, but I do not think wiping out agriculture in the Central Valley is a good way to go about it. I do not think, also, it is realistic to believe that we can have free project conditions and still have a project any more than we can have the Los Angeles River be restored to its natural state and still have the City of Los Angeles. I think the goals in the bill are not realistic and I would hope that we would set goals that are attainable and attainable without the destruction of the agricultural base.

Finally, Mr. Chairman, I am a farmer's son—I do not know if you know, but I grew up on a small farm near Sanger and I am obviously biased in that regard. I believe that the agriculture that would be destroyed with this bill is far more suitable for the enhancement of environmental conditions than the cement and asphalt that would replace it as water is peddled to the highest bidder. We now kind of accept this notion that water ought to be sold out there on some free market. I do not. We do not sell our electricity to the highest bidder and leave people without it. I do not think we should sell our water the same way either. If you look around here, there are not any fish in the Los Angeles River. It is cement lined from one end to the other. So, turning more water over to urban uses if the result is as it has always been in the past, to fuel more urban growth, will not have desirable economic consequences.

I want to be constructive as this legislation and Mr. Miller's goes forward. I did not make an attempt to derail this legislation last year. I attempted to work with him. We made many concessions along the way and I hope we can do the same. Thank you.

[The prepared statement of Mr. Lehman follows:]

PREPARED STATEMENT OF HON. RICHARD H. LEHMAN, U.S. REPRESENTATIVE FROM CALIFORNIA

I would like to begin by thanking Senator Bradley for giving me the opportunity to join the other Members of Congress on this panel as we address legislation that could have as big an impact on parts of this state as the fifth year of drought we are now experiencing. As a representative of the significantly agricultural 18th District California, which includes portions of Fresno, Madera, Mono, San Joaquin, Tuolumne, and Calaveras counties while I share his intent, I have many concerns with the proposals outlined in the bill proposed by my colleague from New Jersey. However, I will confine my remarks to a few key aspects.

I have spoken at length on this issue in previous years because, while I support aspects of this legislation's purported intent, I have strong reservations about its methods. The legislation intends to "establish conditions for the sale and delivery of water from the Central Valley Project." There are a number of issues that are, I believed, pertinent to our discussion of how the Central Valley Project, if change is considered necessary.

I need not remind anyone that this state, even though we have received some much needed relief, is in the throes of its worst drought in history. The State Water Project and the Central Valley Project have substantially reduced their deliveries to all users. The State Project has zeroed deliveries to agricultural users and the Central Valley Project has reduced most users to 25 percent of their normal supplies. Mr. Bradley states that the "Central Valley project is part of the problem in the drought crisis." Already reeling from a disastrous freeze and a sluggish economy, the Central Valley must now cope with legislation that seeks to reorient a principal feature of the area's lifeline.

It is argued with this bill that we must hold water users to the highest standards of environmental protection, economic sense and sound water management. I have strongly supported responsible environmental policy and I do not expect to change now. As the author of successful legislation to protect the Tuolumne River, the Kings River and the Mono Lake Basin, and the most important nesting area on the California portion of the Pacific Flyway, I have done as much, if not more, than most on this committee to protect fish, wildlife, riparian habitat and wetlands. For this I have taken a considerable amount of criticism from some of my own influential constituents. I will say now, as I have said in the past, more water must be allowed to flow in the San Joaquin River and existing wildlife habitat must be protected and enhanced. However, I will resist with all my strength attempts to portray my constituents and the Project which benefits them as the sole or even the primary culprits responsible for environmental degradation.

I was pleased to see that Senator Bradley, in an article in the Los Angeles Times, acknowledges that the Central Valley Project is a remarkably successful agricultural enterprise, adding billions to the state's economy and employing hundreds of thousands of people. However, I am sorry that the legislation fails to recognize this fact, blaming the Central Valley Project and not a combination of industrialization, urbanization, water and power development for municipalities and other state and federal water projects for their part in the decline in wildlife in the Central Valley.

The legislation also fails to recognize recently successful efforts to resolve problems in the Central Valley; efforts without the heavy handed involvement of the federal government. Last year, the California state legislature approved legislation to establish a program for the solution of multi-resource problems on the San Joaquin River. The law establishes the San Joaquin River Management Program to address many of the same concerns addressed in Congressman Miller's bill. It follows a program established in 1986 to resolve multi-resource issues on the Upper Sacramento River which resulted in the Upper Sacramento River Fisheries and Riparian Habitat Management Plan. Fortunately, the legislation we are here to discuss proposes implementation of the Upper Sacramento River Fisheries and Riparian Habitat Management Plan but, unfortunately, makes no mention of the San Joaquin River Management Plan.

Both programs recognize that river systems have tremendous social, environmental and economic value for flood protection, agricultural, municipal, industrial uses as well as for hydro power, fish, wildlife, recreation and navigation. Both programs have also involved representatives from the many and varied interests concerned about and potentially affected by comprehensive efforts to improve river ecosystems.

Unlike the bill we are here to discuss, these approaches identify actions that can be taken to benefit legitimate uses of the river system and develop compatible solutions without pitting some beneficial uses of water against others. We need to arrive at reasonable goals for improving river systems within the Central Valley or we will become embroiled in legal controversies and the only result will be to continue to degrade the river system's overall health. Realistic legislation, with serious compromise, will bring us closer to restoring the system's overall health.

I will not get into any further detail except to point out that this state is experiencing a drought of unprecedented proportion and I hope that before we jump to eliminate farming in the state of California with the mistaken impression that the CVP is the sole cause of wildlife habitat destruction and that all California farming is massive agribusiness, let us take a balanced view of this issue and understand that all Californians can benefit from a concerted effort to resolve existing problems. I would like to finish with a few construction comments for our consideration.

First, agricultural water users should not be used as a punching bag as we attempt to resolve the problems associated with environmental degradation. Second, let us set realistic and attainable goals to enhance declining fish and wildlife populations. Third, let us acknowledge that other factors besides the Central Valley project have contributed to decline in wildlife including industrialization, urbanization, and other types of development. Fourth, let us realize that farming plays a significant role in California and, rather than doom it to obsolescence, develop reasonable compromises that will allow farming to continue as a viable enterprise and source of sustenance for millions of families.

Already millions of acres in and around my district lie fallow, and nearly one hundred thousand people have been left unemployed by the current drought. The drought is devastating enough. I hope that we will keep these concerns in mind as we continue the process of addressing this legislation and that part of this process includes hearings in the Central Valley of this state. All views must be included. I look forward to our panelists' testimonies.

Senator BRADLEY. Thank you very much, Congressman, and we are certainly prepared to have discussions at any time.

Mr. Costa.

Mr. Jones.

STATEMENT OF BILL JONES, ASSEMBLYMAN, CALIFORNIA LEGISLATURE

Mr. JONES. Thank you, Mr. Chairman, members, Senator Seymour, Councilman Lehman. It is a pleasure to have an opportunity to be with you, although we have not met personally, we have followed your efforts on the water bill and wish to be here this morning, briefly, to share with you some of our thoughts. I am not going to go through and read my testimony. I would just like to share a few thoughts with you. You can certainly review that at your leisure.

Senator BRADLEY. Your full testimony will be printed in the record.

Mr. JONES. Thank you.

I do represent much of the same area as Congressman Lehman outlined, Mariposa, Eastern Madera, Eastern Fresno and Eastern Tulare.

One of the critical issues that I am concerned about is I believe that there is a feeling, a misunderstanding about the Central Valley Project. I just want to review, briefly, for historical purposes, what the Central Valley Project really is.

The project was developed by a large number of visionaries that went out and stuck their neck out, both from a Governmental standpoint and farmers from a standpoint to give away contract rights, riparian rights on the river with the confidence that Government would stand behind the commitment to stay with these farmers through the duration.

Let me just restate that. These farmers gave up what was theirs and it had always been theirs, with the understanding that they could have confidence that Government would not change the deal.

Now, as we move through the years, we had tried, I believe, to work out a lot of the different issues and they have come up and obviously as the pressure of urban growth has come forward, the problems become more complex. We understand, as Congressman Lehman mentioned, that we have to be players in the process. I represent the Friant water area which was the beneficiary of the contract process; whereby. farmers on the east side gave up their riparian rights and farmers on the west side gave up their riparian rights—farmers on the east side picked up water from the San Joaquin River. There is a very complex matrix of understanding and exchange contracts that ties that area together economically. It is important for us to work with your Committee, Senator, and others as California changes.

But, let us talk a little bit about the kind of California we want to see changed. We understand in agriculture that we do not represent necessarily everybody. Our point of view is obviously askew to our agricultural background. Mine, I am a farmer just as Congressman Lehman. But, I wonder, as time passes, and even though people believe that maybe they do not need all the agriculture in the Valley and California to provide food on the table, I really wonder if people want to see the Valley, the San Joaquin Valley, looking like the Silicon Valley or end up looking like Los Angeles.

We are trying to learn from our mistakes in the past in California. We are trying to work on bills such as Mr. Warren mentioned about farm use planning and not over develop. We have a bill this year that we are carrying to do to do some of the things that Congressman Lehman did.

The reason I mention this is because this bill of yours does not operate in a vacuum. It operates in an environment that is very sensitive in the San Joaquin Valley, one of the last pristine environments that we have without a tremendous amount of development and we are going to see that over the next 10 years.

If we take this water away from the Valley, not only do you dry the Valley up, but you move the water to areas that are already overbuilt. If we leave the water in the Valley, the area is going to become built up over a period of time anyway. The question is how we build it up.

So, I stress the fact that to move a measure like this without environmental impact report or anything, to be talking about these kinds of massive changes on the internal structure of California, not just the agriculture impact—how many dollars, how many tomatoes, how many cotton plants we produce—but the aesthetic value of the open space in the interval valleys of California. You are talking about destroying a very complicated matrix there. I urge you to please visit with us some more about that process.

The second point I want to make briefly. The 3603 process. I know you probably heard about it and I know that it may seem in some manner shape or form as a smoke screen to maybe put things off and delay. I would say if I was in your shoes, I might feel the same way. But, when you look at the Sacramento River effort and you look at what was done there, we invite you, we ask you to participate with us in this process. Mr. Costa, Mr. Lehman and I and others have worked on the renewal of the Friant contracts. We have worked with your office. I did not have a chance to meet with you, but had a chance to visit, as Mr. Costa did, with some of your staff. We want to work with you on these renewals.

But, as Mr. Lehman said, a 1-year contract, a 2-year contract, just the very nature that you are raising the issue of whether or not contracts are going to have long-term renewals is shaking the banking folks over here that are financing these growths. I could take you and show you that as a fact. I am not just saying that.

So, the 3603 process is a conciliatory, everybody gets around the table—and I compliment Mr. Costa for his efforts on that—but that is the kind of process that allows us to make change, constructive change, without destroying the internal fabric of what we have built.

I say "we have built". Congress was an important part of the Central Valley Project. Let me tell you, the farmers there, the small, rural communities that are growing and growing and growing—if you look at the numbers in the Valley, we are the fastest growing area in the State—those small communities are drawing water from the CVP. You are going to see the CVP, whether anything happens to this bill or not, become more and more an urban water source. It is a transition period.

I encourage you to look at it from an overall standpoint, Mr. Chairman, and understand how that matrix is changing and how we are trying to make it change and work it out.

My last point on the fish and wildlife issue, the assumption I read in your measure is that somehow the CVP destroyed fish and wildlife and we had ignored—we, the farmers, the people in the Central Valley—fish and wildlife for many years. Let me say this: If it had not been for Friant, the river would be dry. We would have been dry quite a while ago. There would be no river. So, the development and the vision of the farmers, the Valley political leaders and the people who have worked in the Valley for the last 30 years, allowed us to regulate the water and to reduce even in these extended drought years. We understand that it may never come back to the way that it was pre-project. But, I do not know how you can ask, Mr. Chairman, for the river to run pre-project and at the same time have the dam. Do you follow me? I think it is not possible. I think the dam provides us an ability to meet the ongoing challenges and balance all these issues as we move forward.

I would just like to say that I am very pleased to be with you today. I appreciate the opportunity to have my say for my constituents and also I would ask and encourage you, if you would, to please join Senator Seymour and myself and Mr. Lehman, Mr. Costa, come to the Valley. If not for a hearing and visit with our people and I think you will see that we are working and look forward to working with you for a constructive change. Thank you, Mr. Chairman.

[The prepared statement of Mr. Jones follows:]

PREPARED STATEMENT OF BILL JONES, ASSEMBLYMAN, CALIFORNIA LEGISLATURE

Good morning my name is Bill Jones. I represent the 32nd Assembly District which is located in the central San Joaquin Valley and includes parts of Tulare, Fresno and Madera counties and all of Mariposa County.

OVERVIEW OF THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT

The purpose of the Act is to promote and expand the authorized purposes of the federal Central Valley Project. The bill establishes certain rigid conditions, namely fish and wildlife qualifications, which must be satisfied before the Secretary of Interior can sell or deliver water from the CVP under contract or other agreement.

While I support initiatives aimed at restoring fisheries and other environmental benefits, the legislative approach offered by Senator Bradley ignores the need to balance legitimate human and environmental needs.

The introduction of S. 484 shows insensitivity to the condition in which California is currently experiencing. The state is reeling in its fifth critically dry year. Strict water rationing efforts are going into affect statewide. Agriculture water deliveries from the State Water Project have been suspended.

The majority of Central Valley Project agricultural water contractors are taking their second straight year of water deficiencies; many have received cuts of up to 75 percent.

The California State Water Resources Control Board, very much aware of the delicate balancing act needed to manage the state's water supplies, is in the process of deciding the Bay-Delta water quality hearings.

The proposals contained in S. 484 are premature in light of the above efforts currently under way by the state.

IMPLICATIONS OF S. 484

The limitation of long-term water contracts to a period of one year, or 10 years if supplies are reduced, could hamper the ability of agricultural water users to remain viable.

Crop years do not necessarily follow water years. Constant disruptions in the surface water supply would decrease a farmer's ability to adequately plan his farming operation from year to year.

Most agricultural lending institutions consider the dependability of a farmer's water supply when granting loans.

Agriculture is the leading industry in many smaller Central Valley towns. The combined effects of the freeze and drought are already manifesting themselves in unemployment and public assistance lines. Additional threats to the economy would be most disruptive.

One-year contracts would be equally disruptive for urban users. It is not fair to make long-term water contracts available only on condition that water users give up a portion of their supplies.

Special 20-year contracts for urban users are unfair, particularly when agricultural water users take the first outs anytime the water supply is short.

Barring the sale of the uncontracted firm yield of CVP water until such time that the Acts's fish and wildlife and water quality improvements are enacted is both unfair and unrealistic.

FISH AND WILDLIFE RESTORATION OBLIGATIONS

Fish and wildlife already constitute a beneficial use of water and are a designated project purpose of the CVP. The formation of the Central Valley Project Restoration Trust is premature considering the programs under way currently in the state.

A state law establishing the San Joaquin River Management Program provides for investigation and research into the decline and restoration of the San Joaquin River and its tributaries.

A similar state law establishing the Upper Sacramento River Task Force provides for investigation and research into the decline and restoration of the Sacramento River and its tributaries.

These two efforts should be granted the time to conduct the research and present findings prior to federal intervention. In fact, I invite you to participate in our process.

The bill assumes that the construction and operation of the CVP is the primary contributor to the decline of fish populations and wildlife enhancement, when there are numerous factors to consider.

The decline in fish populations could be attributable to commercial fishing, logging, mining and the subsequent runoff from those operations, Indian river water and fishing rights, and numerous other factors.

Since the construction of the CVP and other water development projects, there is more water released down those rivers and flowing out of the Bay-Delta Estuary than there would be under natural, pre-project conditions. To that extent, the projects may have contributed to the maintenance of certain fish species rather than the decline.

The surcharge required of the water and power customers to help restore the valley's fish, plants and wildlife is simply not fair. Thirty million dollars a year charge translates to about a $7/acre-foot increase forcing water users to pay more for less.

In summary this is not just a water issue of rural America versus urban America, its an issue of taking water from people in one region and foreclosing on its present and future development, upon which existing financial and business institutions rely, and using that water to sustain and promote growth in another region without examining any of the social or environmental consequences.

Senator **Bradley**. Thank you very much, Mr. Jones.

Assemblyman Costa.

STATEMENT OF JIM COSTA, ASSEMBLYMAN, CALIFORNIA LEGISLATURE

Mr. **Costa**. Thank you very much, Mr. Chairman, Senator Seymour and Congressman Lehman. I do appreciate, very much, the opportunity to be here this morning to share my thoughts with you as the former Chairman of the Assembly Committee on Water, Parks and Wildlife for some almost 8 years and still an active member of that Committee. I have been involved with much of the legislation in trying to change water policy in California over the last 10 years. A strategy that involves water management that involves water conservation, involves water development, involves water reclamation, as well as water transfers. We have done much in the last 10 years in all of those areas and I believe, with continued cooperation, we will make even more significant strides in the decade of the 1990's.

My district is comprised of the counties of Fresno, Madera, Kings and Merced counties which are all part of the most productive agricultural region in the world. You might ask what does the Santa Clara Valley and the San Fernando Valley and the Central Valley all have in common?

Well, all three of those valleys in California at one time were very rich, productive, agricultural valleys. Today, three of those valleys—the Santa Clara Valley, the San Fernando Valley—two of those three—are no longer agricultural, productive valleys and have changed considerably as a result of that. That potential change does exist for the Central Valley, the San Joaquin Valley and as such, we want to be mindful of the mistakes that were made in the case of both the Santa Clara Valley and the San Fernando Valley and that we learned from those mistakes.

Senators, Congressmen, if the Federal Government suddenly told you that they were going to take away your livelihood, what would you do? You would be stunned; you would be fighting mad and rightfully so. But, I think that is exactly what will occur if some of these proposed changes are not well thought out before they are attempted to be enacted. I think that there are aspects of S. 484 that falls in that category.

The Central Valley produces one-half of the Nation's fruits and vegetables and nuts. The variety is unrivaled in everything from apricots to zucchini and almonds to wine grapes. The overstatement and the exaggerations that my colleague, Assemblyman Katz, left with you need to be corrected. The impact is much greater and the contributions are significant.

One out of every six jobs in California is connected to farming. Agriculture contributed nearly $18 billion to the State's economy in 1990. When all the related factors are calculated, include food processing, transportation, packaging, financing, agriculture's value to the State's economy is much larger than the figure Assemblyman Katz left you with, but it is over 10 percent of the gross State product of which is the sixth economic unit in the countries of the world.

No small potatoes to be figuratively and no pun intended.

Senator **Bradley**. Although, not many potatoes.

[Laughter.]

Mr. **Costa**. Not many potatoes. But over 240 to 250 other commodities are grown here.

Thanks to California agriculture, we believe we are better fed and clothed than anywhere else in the world. Because California farmers have become so good at what they do, many people tend to take their contributions for granted. But, believe me, a farmer—nothing a farmer does should ever be taken for granted. It is one of the toughest jobs in the world. It requires a great deal of hard work, planning, risk-taking and just plain old luck. Farmers are the biggest gamblers around—they have to be.

Just look at what the farmers have had to deal with over the last several years. An unprecedented drought that resulted in severe curtailment of water supplies; a freeze that we have yet to totally the economic impact that is over $1 billion in crop damage; ever-increasing foreign competition in which we see frustration in the negotiations of the GAT discussions that seem to leave us with a very unlevel playing field; closed international markets; lower commodity prices; and higher debt costs.

People in agriculture sometimes fail much like the Iraq Republican Guard must have failed several weeks ago. Attacks are being launched from all sides and nowhere is relief seen.

What concerns me about your proposed legislation, Mr. Chairman, is here comes another attack on farmers curtailing their ability to produce and to keep crop land in production. Mandatory limitations on water supplies and restrictions in the length of water contracts, I believe, are prescriptions for disaster in the Central Valley and much of the rest of the State which such contracts exist.

If you were to propose any type of legislation in any other area that impacted a segment of the economy whether it be in California or New Jersey or anywhere in between, it seems to me that an environmental impact report would be required, certainly, an economic impact statement would be necessary to determine what types of changes would occur as a result of the proposal.

Nowhere in your legislation under S. 484 do we have the impact question raised of the Fernandez family who are farm workers in Mendota who have a mortgage on a modest home and they are continuing to try to raise their family as best they can as citizens in that community.

Nowhere in this proposal is there a consideration for the Fashu family that has farmed for three generations and continues to provide not only economic benefits and paying their taxes, provides a multitude of other assistance to the community, to the schools in which their children go to. I do not want to see what happened in many areas of the midwest happen in California in the sense of abandoned farms, abandoned towns, dotting the landscape. That is precisely what will happen if farmers do not have an insured and sufficient water supply.

It is the magnitude, in my view, of plant closure. I hear my urban colleagues talk about the problem existing when industries, automobile plants, tire plants, steel plants are forced to close. Plant closure is a very meaningful, real thing. When people become unemployed and they have to seek employment elsewhere. I am sympathetic to those conditions. But, what potentially could occur here is that very same type of plant closure. Nowhere is an environmental impact report or an economic impact statement being even thought about or discussed as it relates to this legislation and the Miller proposals.

Rural communities are almost totally dependent upon agriculture for their survival. When crops are not growing, not only does the farmer suffer, so does the local hardware store, so does the garage, the cafe and other small businesses.

What happens to the farm workers, the merchants, their families when they cannot pay their home mortgages, their rents, their utilities or their property taxes? Unfortunately, we may soon know the answer to that because the drought has caused water cutbacks of anywhere to between 100 percent to 75 percent. While we had a mandatory water rationing last year, in many urban areas in California that were impacted in the fourth dry year people overlooked the fact that last year we had anywhere between a 40- and 60-percent cut in water deliveries to agriculture areas. If somebody cuts your water back 40 to 60 percent, I do not know what else to call that but mandatory water rationing.

In a recent article, Senator Bradley, you acknowledge California has been progressive and forward-thinking in its attention to water conservation and environmental protection. I agree with your observations. I believe we have made significant strides in dealing with the issues of water supply, water quality, fisheries, water conservation and water marketing over the last decade. In many ways, what has taken place in California could be used as models in other parts of the country.

One measure that the legislature proved last year that I think deserves your attention has been mentioned already today because I think it can prove successful in dealing with these issues. That is my bill 8603 that is in law and was co-authored by a number of my colleagues. That provides the formal process to, one, identify the fine problems facing the study area concerning water supply, water quality, flood protection, fisheries, wildlife habitat and recreation. It also compiles a list of ongoing plans, studies and activities related to the San Joaquin River and its major tributaries. Three, it also develops potential strategies for managing the actions to be taken into benefit the entire river system which is essential. We have Federal, we have State and we have a host of local authorities there. No where is there the process in the past to bring all these entities together.

The passage of 3603, in fact, allows that much in the same way in which the Sacramento River Authority was planned some 2 years ago that provided the sort of information necessary which the Congress acted upon. We ask that you give us the same opportunity as was given in the Sacramento River in the San Joaquin River. We think we can do the job. We think we can get it done.

As I indicated, when you talk about the potential impacts of the San Joaquin River, I think it is important that we get credit for mitigation that takes place, whether we look at the whole renegotiation of the contract process.

I think it is very important to note that I am carrying separate legislation to create a 21-mile parkway on the San Joaquin River. That 21-mile parkway that stretches from the beginning of Friant Dam all the way down the river. It will be very instrumental in improving fish and wildlife and dealing with other mitigation for growth.

I invite you, Senator Bradley, to come to Fresno. I will take you on my canoe down the San Joaquin River. You can see, first-hand, what we are attempting to do to improve the quality of the San Joaquin River.

I think it is important as I close that you note that significant action has been taken to deal with environmental issues that you have expressed concern about. The State government has established the model for cooperative participation, including the prominent participation for the Federal Government. I have trouble understanding then, why Federal legislators seem to ignore what we have accomplished and seem bound and determined and now imposed to accomplish this story an ill-advised fair system to deal with an industry that is already impacted by weather-related and financial problems.

My last words——

Senator Bradley. Mr. Costa——

Mr. Costa. These are my last words. You talked about the Public Trust Doctrine earlier and I am very sensitive to the Public Trust Doctrine. I think we have to be throughout this country. I think how we go about what type of form and process we set up is critical on how we reach solutions in which different regions of the State can accommodate to this.

I am familiar with the meadowlands in New Jersey and the changes that they have gone over, over the recent years. I am familiar with the attempts to clean up the Passail River. I think we can make tremendous strides in improving the San Joaquin River. But, we can only do so if we have the sort of cooperative effort by the Federal Government the State government, the local entities, working together to mitigate damages that have occurred in the past, to recognize how we credit that mitigation and that we do so in a way that does not take away the livelihood of the people who have been there for generations.

[The prepared statement of Mr. Costa follows:]

Prepared Statement of Jim Costa, Assemblyman, California Legislature

Mr. Chairman and Members: My name is Jim Costa, and I am a member of the California State Assembly. My district is comprised of the counties of Fresno, Madera, Kings, and Merced, which are part of one of the most productive agricultural areas in the world, the Central Valley.

The Central valley produces one half of the nation's fruits, vegetables and nuts. The variety is unrivaled; everything from apricots to zucchini, almonds to wine grapes.

One of every six jobs in California is connected to farming, and agriculture contributed nearly $18 billion to the state's economy in 1990. When all related factors are calculated, including food processing, transportation, packaging, and financing, agriculture's value to the state's economy is about 10 percent of the gross state product.

Thanks to California agriculture we are better fed and clothed than anywhere in the world.

And because California farmers have become so good at what they do, many people tend to take their contribution for granted. But believe me, nothing a farmer does should ever be taken for granted. It is one of the toughest jobs in the world, and requires a great deal of hard work, planning, risk taking, and just plain ol luck. Farmers are the biggest gamblers around; they have to be.

And just look at what farmers have had to deal with over the last several years: an unprecedented drought that resulted in the severe curtailment of water supplies, a freeze that caused nearly $900 million in crop damage, ever increasing foreign competition, closed international markets, lower commodity prices, and higher debt costs.

People in agriculture feel like the Iraqi Republican Guard; attacks are being launched from all sides.

And that's what concerns me about your proposed legislation, Mr. Chairman: Here comes another attack on farmers curtailing their ability to produce and keep cropland in production.

Mandatory limitations on water supplies and restrictions on the length of water contracts are prescriptions for disaster for the Central Valley.

I don't want to see what has happened in many areas of the Midwest to happen in California: abandoned farms and abandoned towns dotting the landscape. And that is precisely what will happen if farmers don't have assured and sufficient water supplies.

Rural counties are almost totally dependent on agriculture for their survival. When crops aren't grown, not only does the farmer suffer, but so does the local hardware store, garage, cafe, and other small businesses. And what happens to the farm workers, merchants and their families when they can't pay their home mortgages, rents, utilities or property taxes? Unfortunately, we may soon know the answer now that the drought has caused water cutbacks of up to 100 percent in some areas.

In a recent article, Senator Bradley, you acknowledged that California has been progressive and forward thinking in its attention to water conservation and environmental protection. I certainly agree with your observation and I believe we have made significant progress in dealing the issues of water supply, water quality, fisheries, water conservation, and water marketing over the last decade.

One measure that the Legislature approved last year deserves particular attention here today because I believe that it proved successful in dealing with issues that the Bradley bill is attempting to address.

Assembly Bill 3603, coauthored by Assemblyman Bill Jones and myself, created the San Joaquin River Management Advisory Council to develop solutions to water supply, water quality, flood protection, fisheries, wildlife habitat and recreation needs for the San Joaquin River. The council is composed of representatives of various federal, state, and local governmental agencies, and environmental organizations.

The council has now been meeting on a monthly basis for one year and the various subcommittees that have been formed are in the process of devising appropriate action plans and formulating other recommendations.

AB 3603 was patterned after earlier legislation that established the very successful Upper Sacramento River Advisory Committee, which was created to make recommendations regarding the restoration and protection of fisheries resources and riparian habitat of the Upper Sacramento River and its tributaries.

The committee has recently issued a report outlining specific recommendation for habitat restoration and the Governor has proposed funding to carry out those restoration efforts.

Mr. Chairman, I think it is quite evident that significant action has been taken to deal with the environmental issues that you have expressed concern about, and state government has established the model for cooperative participation, including prominent participation by the federal government. I have great trouble understanding why federal legislators seem to ignore what we have accomplished, and seem bound and determined to now impose a confiscatory, ill-advised, and unfair system on an industry already reeling from weather-related and financial problems.

Lastly, I would like to make a plea to apparently a significant segment of the Congress, including a sizable group from my own party, that you stop always painting agriculture as villainous polluters—which they are not; end the dual standard of imposing certain requirements on rural sectors that you would not dare impose on urban areas—we only ask for equal treatment; and refrain from your open hostility to farmers and farming communities.

Senator **BRADLEY**. Thank you very much, Senator Costa.

Senator Seymour.

Senator **SEYMOUR**. No questions.

Senator **BRADLEY**. Congressman Lehman.

Mr. **LEHMAN**. Yes. The Bradley bill is radically different from the Miller bill and I think it ought to be clear for the record.

The Miller bill is kind of like big green on the San Joaquin. It attempts to solve everything; it is a protocol for fish. I will give you that one, too. What it does, it takes every problem on the San Joaquin River, no matter what they were caused for, and says to the CVP, "Here, pay for it. Solve it." Then, at my behest, later on, you are going to PG&E and see San Francisco and others can come in.

The Bradley Bill, does not set specific numbers in terms of goals, does not mandate that this or that be in, but it is more of a generalized improvement but at least it is only limited to damage caused by the CVP and does not go beyond that. In my opinion, it is much more workable.

The State has made the San Joaquin River a priority and I would just like maybe, briefly, if you would tell us what you are doing. We have to put more water in the San Joaquin. We all recognize that. The water has to come from somewhere. Where do you see that happen?

Mr. **JONES**. One of the reasons that we were looking at this San Joaquin Basin initiative, Mr. Lehman, as being a major part of that process is that Mr. Costa outlined and you are well aware, the process is as important as how the eventual changes take place. We are talking these contracts, there are so many peoples lives involved. It is the future of the Valley involved. Mr. Costa mentioned, we want to get credit for the mitigation that we deal with.

We have talked—Mr. Costa can probably address this better—but we have talked about the drainage issue on the west side. We have talked about what happens if the technology applied to rain water that is currently—Mr. Katz explained, maybe a little too graphically and probably exaggerating a little bit—returned to the river in these huge amounts. As we clean this water up and as we apply this water back to the wetlands and back to the rivers, do we get credit for that? Is there a benefit derived back to the Friant system which in turn being asked to mitigate in their contracts for water or is that just something that we have to give back and get no credit for it? That is one of the things that we are looking at and that is one I explained earlier about the matrix between the east side and the west side being so sensitive.

What we are saying with this process is we want to do some positive things. We are doing things, but when we do something on the left hand, we want credit for the whole system. We do not want to have to pay for the mitigation effort twice. We believe that that process and this is one issue where you are taking a resource that is renewable, cleaning it up, moving it back in the system, we would get credit for that.

Another point that Mr. Costa is working on, I think, is a structure of how you might move water around on the—higher up toward the Millerton area and I will let him explain that better than I could probably.

Mr. Costa. Well, it is really a very exciting time. Much can be realized if we are willing to cooperate with one another. We can trade water from the east side of the Valley to the west side by using the San Joaquin Valley as a means to increase the flows. There is the inner-tide down on the southern part of the Valley. If we can get agreement between the Federal contractors and the State contractors, we can, in many cases, make those people in the southern part of the Valley halt, by simply shipping that water through the Central Valley Project and shifting it.

Now, there are some other problems that exist. There is a different price between the State water and the Federal water. That will have to be worked out. Through legislation that was worked out between the Federal Government and the State some years ago, we have a coordinating operating agreement on the Delta. As a part of the resolution to that COA, we have monies that the Department of Fish and Game realizes from the Full Pump Agreement for the express purpose of purchasing water for fish. We have already the concept there for water banking, having some funds set aside to purchase water specifically to improve flows for fisheries. We have done that on the Merced River and I think its application can be very feasible in the area of the San Joaquin River.

Finally, we are looking at the concept of water banking. There are certain areas there where we have tremendous potential for water banking and we really can create—I mean, that is what is exciting about this—a circumstance where we can really have a multitude of benefits. Almost a win/win situation for a number of people in the process and improve the fisheries and a wildlife habitat.

Senator Bradley. Let me, if I could, ask just a few questions. Since you have been very active and innovative in an effort to restore the San Joaquin, do you think that the Bureau needs any kind of direction or encouragement to help your restoration efforts?

Mr. Costa. Yes, I do, Senator. I think this process has been formalized last year with my legislation. The Bureau of Reclamation has complained of insufficient staffing, just to come together at the meetings in terms of the subcommittees that have been created to deal with the certain specific responsibilities. There is no reason, with all the resources, in my opinion, that the Bureau of Reclamation has, that they should have at least adequate staffing to assume these people to do this for this purpose, for starters.

Secondly, I think that the model that was used through Congressman Bosco a couple of years ago on the upper Sacramento can work just as well here on the San Joaquin River. The CVP is not the soul source of the problems that exist with the San Joaquin River. But, they are a contributing player as it relates to the overall solution. They are part of the problem and, therefore, they are a part of the solution.

I think that we can bring the CVP in such a fashion with the State contractors in a meaningful toward resolving some of these conflicts that exist and provide solutions to them, because there are solutions to them. We are just beginning to understand better ways of managing the dams, better ways of managing the water systems. There may be some economic trade-offs that have to be made. We will have to figure out where we get the money to make those economic trade-offs.

If we shipped water from the east side to the west side, for example, and there is a difference in the cost of water, where do we make up the difference? How do we find the funding to do that? Everyone benefits, then there ought to be someway we can find the means to raise the money.

Senator BRADLEY. Let me if I could—do you think that the Bureau has the authority to release water from Friant Dam for fish and wildlife purposes?

Mr. COSTA. I am not a lawyer. I have not looked at all of those contracts to determine what authority the Secretary of Interior has on that point. I know that I have been told that if such an act were to occur, that those with contracts, whether they be riparian contracts or pre-project contract rights to the water, we would certainly see the Secretary of Interior in court very quickly if, in fact, he was to attempt to do that. That probably begs, even more importantly, why you should get involved and we welcome you. I am serious about inviting you to Fresno and on my canoe. I really think, frankly, we can give the direction to the CVP to cooperate. They may not have the authority now. If they do not, then we ought to find a way in which we can work this out.

Senator BRADLEY. Let me ask you if I could ask you, do you think the Bureau has the authority to supply project electricity in order to run groundwater pumps for wildlife refuges? Too legal? Lawyer question?

Mr. COSTA. I would not be the best person to answer that question.

Mr. JONES. Mr. Chairman, if I might, could I respond to your question?

Senator BRADLEY. Sure.

Mr. JONES. The questions that you are raising are the exact questions we raised. If you look at the agenda that we had in the meeting last October, you will find every one of the issues outlined in your bill being discussed by this River Management Group. This is a bi-partisan effort. We are not here, Republican/Democrat, trying to see who can get on top. I know you are not here under that vein. But, we have a serious issue that we are trying to resolve, not destroy people's lives in the Valley in the process. I think it is important in regards to the Bureau, they have been forthcoming, they have been participating and they are looking for us to help them in that solving process.

I just want to say that I welcome your interests and I welcome your bill and I welcome the opportunity to discuss it. But, please, if we can—I stress again, can we discuss it, if possible, so that it is a plus to our process and does not provide a cross signals to the Department of Interior and to the administration and, therefore, make our problem more difficult.

Senator BRADLEY. Okay. Let me, if I could, get your opinion about various elements of the bill just from your perspective. I mean, I doubt that in another hearing you will be present. So, this is your chance to——

Mr. JONES. We will be present anytime you want.

[Laughter.]

Senator BRADLEY [continuing]. Make your comments. The bill authorizes grants to growers to implement conservation measures. Does that make sense? Grants to growers and farmers to implement conservation measures? Mr. Costa?

Mr. COSTA. That follows precedent that we have been establishing here. Since the last drought in 1977-1978, through funds—interest loans on bond measures that I put on the ballot, several hundred million dollars worth, we have provided loans for water conservation for farmers as well as for urban areas.

Mr. JONES. They work.

Senator BRADLEY. Okay. So, that makes sense. Let me ask you, the bill also caps the annual financial responsibility of the CVP and the water and power contractors for fish and wildlife mitigation. Does it make sense to cap their annual exposure, financial responsibility?

Mr. COSTA. I think there has got to be equity there if you are talking about for——

Senator BRADLEY. I mean, should it be unlimited or should we cap it? The bill caps it.

Mr. COSTA. Let me put it this way: In the larger shape of things, if we reach some solutions on how to change the operations of the CV Project and as one of the results of that there is some restrictions in terms of the way water is currently allocated then it ought to impact in my view, electrical generators as well.

Mr. JONES. I would say, Senator, that that would be a point that would be a plus for some of the current receivers of this water in a negotiating process of trying to resolve these other issues that are on the list. So, yes, it is constructive to the process of what point it comes in is a matter of process——

Senator BRADLEY. But it cap makes sense to you basically?

Mr. JONES. Yes, it does. Again, as a process.

Senator BRADLEY. Let me ask you, in the bill, it gives most of the responsibility for mitigating and the decision making about mitigating fish and wildlife essentially to the State of California—Californians. Does that make sense?

Mr. JONES. In my experience, it has been difficult to—you run into cross purposes between U.S. Fish and Wildlife and the State. Anytime you deal with any of these projects, to the extent it clarifies, makes it simpler, you get some answer from one person, rather than a multitude, it probably would make some sense.

Senator **Bradley**. Mr. Costa.

Mr. **Costa**. I think the historical precedent was established in H.R. 3113, the Coordinating Operating Agreement, when the Federal contractors for the first time recognized the State's ability through the State Water Resources Control Board to set standards in the Delta. I think that the State is going to ultimately have to, with serious cooperation on the Federal Government, work this out. There was a lot of negotiations that took place a few years ago when we finally reached a conclusion on the coordinating operating agreement. I suspect under your legislation that similar type of negotiation would have to take place between the State and Federal contractors to reach a condition under which all the parties feel—for lack of a better term—a "comfort zone".

Senator **Bradley**. But, the question is, where the bulk of the decision making should lie. The bill says the bulk of the decision making should lie in the State of California.

Mr. **Costa**. And I concur.

Senator **Bradley**. You concur in that, Mr. Jones?

Mr. **Jones**. Probably so, yes, sir.

Senator **Bradley**. Okay, let me ask you, also, in the bill, there is a section which establishes process to consider the transfer of the CVP to the State of California. Is this commission a good idea to at least to begin to——

Mr. **Costa**. Well, we have passed similar resolutions in the State legislature a couple of years ago to have the State consider buying out the CVP. Historically, you are probably aware, Senator, since you have spent some time on this issue, that the Central Valley Project was initially conceived as a State project back in the Twenties. Then, the depression hit and California's credit rating, in terms of its ability to do bond financing or any of those things, was way beyond our capacity. The Federal Government then took over the concept of the CVP and then later constructed it.

So, it was initiated as a State idea. There have been some thoughts that if we—in fact as the State owned the Central Valley Project along with the State Water Project, that we would have the two major water projects in the State, that we would probably manage and operate them more efficiently. That study ought to be done. I do not see any harm in that. There are a lot of problems in terms of contractual obligations and financing that would have to ultimately ironed out. We are looking at a $10 billion deficit here in California. Maybe things are better in other parts of the country. But, I am not so sure that we could afford to buy the CVP. Now, if you are willing to propose to give it to us, maybe we can work something out.

[Laughter.]

Senator **Bradley**. It will be a very interesting deliberation, I assure you. The Commission's work will be very interesting as people flip back and forth on this. I see it happening even as the legislation moves ahead.

I would like to ask you, Mr. Jones, if we could, the San Joaquin River Drainage Program, the mitigation, the report that has come out, basically says that one of the things that is probably going to have to happen is you are going to have to figure out how to use about 200,000 less acre feet on the west side.

The question is, what are your thoughts about how that could be obtained?

Mr. JONES. There is already a substantial conservation effort going on, on the west side, Mr. Chairman, as far as water reduction. The drought years have even impacted that even more so. So, you are going to see that regardless. The price of the water is not cheap as some people—in relationship to urban areas—but it is not cheap for a grower, they still have to pay for it, they still have to grow crop with it.

I think you are going to find as technology is applied, the drainage water which has been the subject of so much discussion and so much consternation, is going to become a resource, not a liability. I think you are going to find that you will be using it not unlike some of the proposals that have been made in other parts of the country where they are trying to take a limited water supply and rework it. There is technology being applied. There is a number of projects already in the mill and some of them through Fresno State University, some of them that the State is participating in.

You can use less water, but you also have to still deal with the issue of the remaining drain water. I think if we do not look at that as a resource, I think we are missing the boat and we are in the process of doing that.

Can we use 200,000 acre feet of less water? Well, there is 500,000 acres, that is what I—by some estimates that are going to be laid out this year because of the drought, in the current process that we see. That is 780 square miles. That is the distance between here and almost going to Redding.

Senator BRADLEY. So, what is your guess? Do you think you could use 200,000 less?

Mr. JONES. Well, I am saying that you are going to end up with less water being used substantially. What you have to look at is you are going to have an overdraft that is going to be substantial and we are just going to have to see how that impacts the quality. But, we are going to use substantially less, Senator. We are doing it currently this year.

Senator BRADLEY. Does it make any sense in order to get the money to conserve the water to allow the sale of the conserved water and then allow the farmer or the district to take that money for more intensive conservation efforts?

Mr. JONES. Well, that is somewhat similar to what Mr. Costa mentioned to a State program where we are trying to.

Senator BRADLEY. So, basically, that makes some sense.

Mr. JONES. It makes some sense. We do not know exactly how well that is going to work yet because it depends. This drought has impacted us so dramatically that it is not normal times. That is why it is a little hard to tell.

Senator BRADLEY. If I could, just one last question, Mr. Jones.

Can you see any time when Central Valley water could be sold in Southern California?

Mr. JONES. Well, again, Senator, obviously, anything is possible. The Federal Government can do what it wishes and it often does. I think the point that we try to drive home today is that my good friend and colleague, Mr. Katz's point about subsidized water, subsidized alfalfa, subsidized cotton. The fact of the matter is that we are losing 17 to 20,000 acres to urbanization anyway a year in the Central Valley. We are changing over on our own. Do you want to bring the water to Southern California, have Southern California grow or do you want to try to grow our own valley which is, in essence, going to happen anyway? It could happen. You could make it happen, but I think it is not necessarily in everybody's best interest to have it happen.

Senator BRADLEY. I think that is an interesting point. I think there is an inherent tension there——

Mr. JONES. No question about it, Senator.

Senator BRADLEY [continuing]. That has really not been faced between the development needs of the Central Valley and agriculture and the water resource needs, generally, of the State and the Central Valley. I have heard people testify today or make comments today that in part, well, you know, we are going to have urbanization in the Central Valley and that is not good. I have heard other people say, well, we are going to have urbanization and we will need that water for our own urbanization.

Mr. JONES. What we are saying is that we would like to see—we know it is going to happen. We are not saying that the Valley is not going to be developed. We are going to try to not do it in the manner in which the valleys that Mr. Costa mentioned happened in California. We are going to try to do it with some logic and some planning. But to do even that, we already have an overdraft on the east side. We are going to continue to need these water resources. So, if you take it away from us, we end up like they are in southern Colorado where they marketed all the water around and you have nothing but desert. Don't do that to us. That is what we are concerned about.

Mr. COSTA. Senator Bradley, with all the problems that agriculture has today, still one of the best hedges against total urban sprawl has been agriculture in the State. With the environmental problems that exist with urban sprawl, I think agricultural practices are still one of the best hedges and protection against those kinds of things taking place.

Senator BRADLEY. Okay, well—Senator Seymour?

Senator SEYMOUR. Thank you, Mr. Chairman. I would like to ask both of you a question relative to the economic impacts of this proposed legislation upon the State's number one industry, agriculture. No so much my question has to do with the farmers as it does question the economic impacts on the 400,000 jobs—the farm workers, those that are gainfully employed as a result of this number one industry. The question I have for you refers to a component in the bill dealing with a dramatic reduction in the length of time of a water contract. Apparently, I guess, 40 years suggested, may be down to a 1-year contract.

Now, both of you representing agricultural constituencies and agricultural farm workers and those in allied industries, those jobs—those 400,000 jobs. How, in your opinion, might that one change in water contracts impact this employment base?

Mr. JONES. Senator, it would be dramatic as we endeavored to point out earlier. Again, not taking exception, but in the comments that Mr. Katz made, the assumption and the presumption that he likes to make and others do is that here we have got big corporate agriculture in the Central Valley and, you know, you have got subsidies and all this. But, what people miss often times is the point that you have made about the farm worker.

The truth of the matter is, in the Central Valley Project area on the Friant Unit or in the Central Valley Project Unit on the west side, these are not huge operations. These are family operations in many cases. We can take you out and go over and show it to you. I can tell you that when you start having a rippling affect in these small communities, it is devastating. It really is. The freeze showed us that in my—Tulare County area. It is just immediately. We are up to 50 percent unemployment. The bankers, having gone through this process, it is not unlike somebody coming to your house that you have a mortgage on with—whomever, saying to you, "Well, we are not sure we are going to deliver your water next year or the following year. Maybe we will give you water for 4 years, but do not let your banker know because your house might not be worth as much." When that person has that kind of an economic impact, anybody he employs or she employs anybody she does business with, obviously she draws back, Senator.

Senator **Seymour**. Thank you, Mr. Jones. Mr. Costa, do you have an opinion as to what the unemployment factors might be based upon this one aspect of the bill dealing with water contracts and secondly, would it be significant, the impact on employment, what type of State and/or Federal benefits should that occur, would you be seeking?

Mr. **Costa**. Well, as I stated in my comments, I think that there is—the legislation does not provide for an environmental impact report or for an economic impact statement. I believe it ought to. I cannot put a price figure on it, Senator Seymour, at this point; simply to say, it would be devastating. It is the equivalent as I indicated earlier as plant closure. We feel that before we make these sort of significant changes, those costs—those human costs ought to be looked into.

Senator **Bradley**. Let me thank both of you, very much, for your testimony. I think you have added to the Committee record and we will continue our conversations.

I would now like to call Judge——

Mr. **Costa**. Mr. Chairman——

Senator **Bradley**. Your statement will be put in the record.

Mr. **Costa**. And a copy of some of the minutes that the AB 3603 Task Force may be of help.

Senator **Bradley**. We now call Judge John Racanelli. Judge Racanelli, thank you very much for coming. I think that you can shed some light on some of these areas. I would not want the record to show that the legislation envisions 1-year water contracts. It does not. It probably envisions 20-year or however much a farmer might want to agree to as long as he sets aside a certain percent of that water for fish and wildlife purposes.

Judge Racanelli, welcome to the subcommittee.

STATEMENT OF JOHN RACANELLI, RETIRED JUDGE

Mr. **Racanelli**. Thank you, Senator Bradley, Senator Seymour, Congressman Lehman. Thank you, Senator Bradley, for the invitation to appear this morning.

Senator **Bradley**. Do you want to pull that mike a little closer and turn it on?

Mr. **Racanelli**. Can you hear that?

Senator **Bradley**. Yes.

Mr. **Racanelli**. My name is John Racanelli. I am a resident of San Francisco and appear before you at the invitation of the Committee in my own behalf. I do not represent a particular constituency. My interest in being here is purely personal.

Mainly, as a result of my experiences, as a member of the California Court of Appeal from which I have recently retired, I have developed a professional interest in the evolution and results of California water law and policy. It is that interest which has prompted my presence this morning to speak in support of constructive legislative reform. It is within that context that I would like to make a few brief remarks. A sort of a quasar judicial overview of California water history.

It has been so often told the story of the American West is largely the story of control of allocation of its water resources. The broad canvass of development and deployment of California lands and resources has been greatly shaped on the common law principles and contemporary legislation as interpreted by the courts over the years.

As we all know, the initial demands of hydraulic mining for the turn of the century was soon to be overtaken and replaced by the even greater water needs——

Senator **Bradley**. Judge Racanelli, if I could just interrupt briefly. We do need to have a 10-minute time on it.

Mr. **Racanelli**. This is going to take about 5 minutes, I think.

Senator **Bradley**. Thank you. Sorry.

Mr. **Racanelli**. In any event, I will stop at 5 minutes.

[Laughter.]

Mr. **Racanelli**. The initial demands of hydraulic mining before the turn of the century was soon to be overtaken and replaced by the even greater water needs of a burgeoning, grazing, agricultural/industrial uses in the rapidly growing State.

Therefore, veteran doctrines of riparian and the appropriated rights that you have heard much this morning, ones of unquestioned primacy gradually gave way and were limited by the overriding Constitutional rule of reasonable use. There was, of course, as you heard previously, during the 1930's that the cycle of drought and depression that the CVP—first conceived by California authorities—was undertaken and ultimately completed by the Federal Government.

Following World War II, with predictable population shifts and explosive growth and an ever increasing agricultural economy, the need for greater water supplies inspired the creation and completion of a vast complementary State water project and of the next few decades and mosaic, the verbal mosaic of new laws and regulations both at the State and Federal level governing the operation of the massive water projects consistent with established water quality objectives and standards, enforceable under the agents of the California State Water Resources Control Board.

The principle objective of State water policy as reflected in the wide array of State legislative enactments in harmony with related Federal rules and regulations is the protection and enhancement of prescribed beneficial water uses, both consumptive and non-consumptive in nature.

Quite reasonably, domestic use is declared to be of the highest priority, although, as you well know, irrigation for agricultural purposes has historically consumed the greatest quantity of total water resources. The focal point of that policy has consistently been accommodation of the greatest public benefit. Moreover, as a result of heightened environmental concern for the preservation and protection of water habitat and in-stream uses the courts have been quick to invoke the application of the historic Public Trust Doctrine—which we are all familiar—properly underscoring the affirmative duty of the State to take that Trust into account in the planning and allocation of total water resources and to protect those Trust uses wherever feasible.

Clearly, as the 1986 Delta water case decision—sometimes referred to by the surname of the author—the State, acting through its authorized agency, is fully empowered to prevent waste or unreasonable use or methods of diversion of water in carrying out its legislative mandate and in protecting the delicate eco-system within the Sacramento/San Joaquin/Delta as well, of course, as the San Francisco Bay environment.

As we enter our fifth consecutive dry season, with dangerously reduced water storage, there is, if anything, an urgent need for progressive regulatory action emphasizing coordinated conservation measures, realistic contingency planning and a forthright balancing of competing demands for scarce water supplies.

In striking the appropriate balance, the greatest public benefit must be served. The public interest cannot be held hostage to an acrimonistic methods or methodology in the allocation and distribution of State water resources. Our elected representatives and appointed officials must implement remedial measure to cope with near-term problems and to engage in innovative planning for the future. Anything short of that level of commitment, I suggest, invites serious risk to the public interest in California.

The reform that is proposed, Senator Bradley, under your bill, S. 484, appears to me to offer realistic options and incentives in existing and future CVP water contracts and would establish a vital safety net designed to replenish depleted fisheries and to restore wildlife refuge, improve water quality in the Delta and to encourage, hopefully, strategic planning for future contingencies.

Finally, proposed creation of an advisory body to study and make recommendations regarding the potential of the CVP in the sense back to the State of California is a logical, pragmatic step in favor of a single responsible State water authority and comprehensive delivery systems serving the best interests of all of the beneficial users within the State.

In conclusion, in light of the history of water objectives and water rights, I briefly recounted, taken against the existing background of scarce water resources and danger of ecology and conflicting policies, the proposed reforms contained in S. 484 deserve, I think, wide-spread support and they certainly have mine. Thank you.

Senator **Bradley**. Judge Racanelli, let me thank you very much for your testimony. As so often in these matters, the most important testimony drew the least light. But, let me, if I can——

Mr. **Racanelli**. That is not a situation that I am unfamiliar with.

[Laughter.]

Senator **Bradley**. If I can, let me follow-up and ask you: How does the Public Trust Doctrine apply to Federal water projects like the Central Valley Project?

Mr. **Racanelli**. The Public Trust Doctrine is, I think you know, as interpreted by the California courts has been one to place primary emphasis on a national heritage—on the natural heritage of natural resources. The sovereign rights of the people to control this natural resources even antedating the corporation of the States within the Union. It is a carry over from the commonwealth. It provides, essentially, for accountability of any action by State agencies, Federal agencies or their respective administrative arms—in the management and use and distribution of natural resources where—and balancing the interest against the Trust uses—the so-called Trust uses, largely in-stream habitat uses within the context of our discussion this morning.

So, it is rather a paramount doctrine that would consistently apply here in California.

Senator **Bradley**. How likely do you think it is that the Public Trust Doctrine might be called upon to restrict CVP water rights in order to protect fish and wildlife or water quality?

Mr. **Racanelli**. Well, after the age and conjecture, I suppose on that, we take these things in context of hard cases, but it would not strike me as surprising that it would appear in the courts as frequently as the issue were presented by showing the degradation of non-consumptive activities or uses within the Delta, within the stream waterways of California. There are cases on the books now involving that scenario in a lesser magnitude.

So, it is rather foreseeable.

Senator **Bradley**. Foreseeable. You think that it is—well, that is an interesting adjective to describe it.

But, it is——

Mr. **Racanelli**. It is likely to occur, I think.

Senator **Bradley**. Likely to occur.

Mr. **Racanelli**. Challenges would mount. If those uses did not receive the kind of careful attention in the planning process and in the allocation process by the responsible agencies. This of course, is my personal view.

Senator **Bradley**. Yes, your personal views, right. But you have a distinguished history in this area, so, I think that your views are instructive for us. It is a thing that all of us should ponder because that would mean essentially a court would be running CVP. If people do not want to have any change, that tends to be the direction that it is going to head in. That will be outside of any legislative remedy.

Let me ask you in terms of beneficial use, the Beneficial Use Doctrine, can the argument be made that it is not beneficial use of water to use it to grow water intensive crops in a very dry area? In this regard, I am thinking of, you know, how can growing rice in a drought stricken desert be viewed as a beneficial use of water? It is important that this be on the record because (a) I want to hear what you say; (b) other people who read this record will have the benefit of your own view of the rice issue.

Mr. **Racanelli**. Well, I do not think there is anything novel in that notion. I think that argument has already been made. There has been a great deal of discussion as to the kinds of planning and planning reform that needs to be undertaken in States like California that have now, for us at least, periodically sustained water shortages and how we allocate that precious resource. Where there is a water intensive activity on one form of agricultural pursuit in contrast or in balance to other needs of an urban or suburban areas, obviously, a balance must be struck that serves that greatest public benefit.

These decisions rely largely, on the first instance at least, for the policy makers, the legislators, the water managers and local governmental bodies. Hopefully, these issues will be resolved at that level and the courts should come in as a last resort. But, indeed, the courts are there for that purpose—to resolve disputes up to that point to prove them to be insolvable.

Senator **Bradley**. Thank you very much.

Senator Seymour.

Senator **Seymour**. Just one quick question, Mr. Chairman.

Judge Racanelli, as you know, the Federal Government can preempt State law if it so chooses. However, do you see any danger should the Federal Government alter the CVP purposes that we might not place a Federal determination of environmental concern in place of California's ability to condition water use under the public trust?

Mr. **Racanelli**. Well, of course, we cannot as a legal proposition—in my view that cannot happen under the Supremacy Doctrine.

It is in these areas and to some extent, Senator Seymour, you recall that we dealt with part of that issue in the context of modifying existing water permits of the projects. The Authority of the State Water Control Resources Board to modify existing permits that they were perfectly authorized and empowered to do so under the fabric of both the State and Federal law because there was no inconsistency. State law and regulations were in full harmony, compatible with, the Federal law. Specifically, the Clean Water Act, Federal Pollution Water Control Act. That harmony must be maintained. Obviously, if there is a clash of fundamental purpose or objectives, the Federal law will have to prevail.

Senator **Seymour**. Thank you.

Senator **Bradley**. Are you going to pass on this one?

Mr. **Lehman**. No question, Mr. Chairman. I am just happy to see that Mr. Racanelli is a real person. He is not just a decision.

[Laughter.]

Senator **Bradley**. Judge Racanelli, let me thank you very much. I think that your decision plus your testimony today adds another dimension to our whole deliberations. I think that it recasts what are the possibilities in this area and I think that it raises real concerns on the part of people who are now benefiting from the Central Valley Project. Absent fish and wildlife mitigation, absent solving drainage water quality problems, absent a series of other things, what you warned us of today was that it could very well be that a court, at some point in the near future, will be making all the determinations that all of the elected representatives were here today taking positions on. That, of course, is something that we would like to avoid, not only from the standpoint of having flexible and efficient allocation of resources, but I, frankly, think elected representatives, better determine the future of areas than do judges, with all due respect.

It is only in the absence of action that judges step in. Indeed, that prospect is probably helpful from time to time to let us know that there might be a judge to step in. I think that we would like to, if possible, avoid that. But, we can only do that by our own actions.

Mr. RACANELLI. I fully support your comments, Senator Bradley. I think particularly the more complex the situation is, it winds up in the court forum. Certainly water rights and water quality and water allocations is about as complex and as important an issue that you will find. This hopefully, should be resolved by the people that I have mentioned, the people that we are all familiar with. Those resources, there is where the talent lies. There is where the issues should be hashed out. There is where the disputes and disagreements will hopefully be compromised. The court should indeed be the last resort.

Senator BRADLEY. Thank you very much, Judge Racanelli, for your testimony.

Our last panel this morning—I will remind everyone that we will be reconvening at 2:30 for the afternoon panels. Our last panel this morning will be Richard Atwater, General Manager of the West Basin and Central Basin Municipal Water District in Redondo Beach and Andrew Cohen, Director, East Bay Municipal Utility District, Oakland, California. Let me welcome both of you to the Subcommittee and I look forward very much, to your testimony.

Mr. Atwater.

STATEMENT OF RICHARD ATWATER, GENERAL MANAGER, WEST BASIN MUNICIPAL WATER AND CENTRAL BASIN MUNICIPAL WATER DISTRICT

Mr. ATWATER. Excuse me, I am not doing very well this morning. But, I will be brief and summarize my written testimony.

Chairman Bradley and Senator Seymour and Congressman Lehman, good morning. I want to thank you for the opportunity to testify today.

The West Basin Municipal Water District and the Central Basin Municipal Water District support the policy principals in S. 484 as a key component to solving California's complex water resources problems.

West Basin and Central Basin firmly believe that the fundamental changes needed in the management and operation of the Central Valley Project to meet the current and projected water needs of California.

Certainly there are some, and we have heard some arguments to that this morning, that the historic authorization and contractual agreements in the 1930's, 1940's and 1950's should be cast in stone not to be reconsidered again.

However, I do not agree with that policy. It is interesting to note that in our sister State in Arizona contracts executed on its large Federal project, Central Arizona Project, has the opposite priorities by contracts by the Secretary of the Interior. And municipal industrial uses are first priority and irrigated is second supplemental supply. And the reason why, clearly because those contracts were executed in the 1980's not in the 1940's.

The allocation of these scarce water supplies will have to be carefully balanced between the competing needs throughout the State. Clearly the CVP should be managed as a water storage and delivery system for the whole State and not for a selected few.

The West Basin Municipal Water District and Central Basin Municipal Water District are located in the coastal plane of Los Angeles County. Both districts are members of the Metropolitan Water District of Southern California and receive about two-thirds of their supply from the Metropolitan Import System from the Colorado River and the State Water Project System. The other remaining one-third is from local ground water supplies and reclamation or re-use of waste water.

Over 40 cities wide within the boundaries of the two districts with an overall population of about 2.2 million. Virtually all of Californians are dependent upon in one way or another the Federal Central Valley Project and the State Water Project as an integrated delivery system throughout the State, although the complex contracts, water rights and allocation schemes do treat them as separate systems. In practice they all operate under the COA as a joint project.

However, unfortunately today with this 5-year drought we have a clear inadequacy of the major State-wide delivery system. However, that is not just a drought phenomenon alone. Growth, inadequate water structure is a big part of the problem.

Let me illustrate this point in pointing out that 3½ years ago the California Department of Water Resources updated the State Water Plan, and particularly in looking at the State Water Project, indicated that in the year 2010 it had delivery requirements at 3.6 million. Unfortunately in 1991 that was the delivery request. And clearly as area of speakers have noted the project is very inadequate. And a quick conclusion is that we will have severe shortages throughout the next decade unless substantial changes are made in the water management policies throughout the State in developing new supplies.

Let me talk a little bit about Southern California Water Management. We in Southern California certainly agree with Judge Racanelli's discussion of reasonable water use. We certainly do not view that our future water needs are going to come from the Columbia River or some other source. Certainly we do not view our only solution to be further importation of water from Northern California.

In Southern California we have developed innovative programs to recycle waste water, conjunctively manage our local ground water aquifers and implement state-of-the-art conservation programs. And just recently in the last few years substantial serious engineering studies have begun to look at ocean desalinization in Southern California.

But, the bottom line is even with all these innovated new water supply programs in Southern California we will be dependent on imported water from the Colorado River and from Northern California through the foreseeable future.

Therefore, the Federal Government's role in managing the Federal Central Valley Project, and more particular, the Colorado River supplies to Southern California, is a critical issue to the 15 million people who live in Southern California today. And with the projected growth of going over 20 million people in the next 20 years.

Let me also, Mr. Chairman, compliment you for re-introducing your Reclamation Waste Water and Ground Water Study Act, because I think clearly that is another component to solving California's water problems. I think it is very far sighted. Waste Water Reclamation is clearly one that does not have any opponents both from all aspects in the community, from industry to the environmental community they strongly support the development of Reclamation and Waste Water Re-use Projects.

Mr. Chairman, thank you for the opportunity to testify today, and the West Basin Municipal Water District and the Central Basin Municipal Water District offer our assistance and support for the far reaching and bold new approach to the management and operation of the CVP for the benefit of all California.

[The prepared statement of Mr. Atwater follows:]

PREPARED STATEMENT OF RICHARD ATWATER, GENERAL MANAGER, WEST BASIN MUNICIPAL WATER DISTRICT AND CENTRAL BASIN MUNICIPAL WATER DISTRICT

Chairman Bradley and members of the Subcommittee, thank you for providing me the opportunity to testify on S. 484, the "Central Valley Project Improvement Act." The West Basin Municipal Water District and Central Basin Municipal Water District support the policy principles in S. 484 as a key component to solving California's complex water resources problems.

West Basin and Central Basin firmly believe that fundamental change is needed in the management and operation of the Central Valley Project (CVP) to meet the current and projected water needs of California. Certainly, there are some who will argue that Congressional action and administrative agreements enacted in the 1930s should be viewed as cast-in-stone, never to be reconsidered by the United States Congress again, I do not agree with this policy. The 1991 drought crisis is symptomatic of a new era of California water, severe shortages are very likely during the next decade. The allocation of these scarce water supplies will have to be carefully balanced between the competing needs throughout the State. Clearly, the CVP should be managed as a water storage and delivery system for the whole State and not for a selected few.

The West Basin Municipal Water District and the Central Basin Municipal Water District are located in the coastal plain of Los Angeles County. Both Districts are member agencies of The Metropolitan Water District of Southern California (Metropolitan) and receive about two-thirds of their annual water supply from Metropolitan's import delivery system and the other one-third is local groundwater and reclaimed water (wastewater reuse). Over forty cities lie within the boundaries of the two districts with an overall population of approximately 2.2 million.

CALIFORNIA WATER PROBLEMS

Virtually all Californian's are dependent upon the CVP and the State Water Project (SWP) for at least a portion of their water supply. Unfortunately, this five-year drought illustrates the inadequacy of those systems. But this is not a drought phenomena alone, growth and inadequate water infrastructure is a big part of the problem.

To illustrate this point, I will go back a few years to 1987 when the California Department of Water Resources (DWR) updated the State Water Plan (Bulletin 160-87). The Plan projected that water demands in the year 2010 for the SWP would be 3.6 million acre-feet, unfortunately this need was reached in 1991!

SOUTHERN CALIFORNIA WATER MANAGEMENT

We in Southern California certainly agree with the water law provisions of the State Constitution, "water is owned by the State and parties have right to reasonable use". We do not view that our future needs should only come from the importation of more and more Northern California water.

In Southern California, we have developed innovative programs to recycle wastewater, conjunctively manage our local groundwater aquifers, and implement state-of-the-art conservation programs and during the past few years, we have begun serious engineering studies regarding ocean desalination.

But the bottom line is, even with all these innovative new water supply programs, Southern California will continue to be dependent on imported water to meet a majority of its water needs through the foreseeable future. Therefore, the Federal Government's management of the Colorado River and the CVP will have a dramatic economic impact on the 15 million people currently living in Southern California.

LEGISLATIVE AND ADMINISTRATIVE ACTIONS NEEDED TO IMPROVE FEDERAL WATER POLICY IN CALIFORNIA—S. 484

Federal water policy and its implementation is important to Southern California because of Metropolitan's contracts with the United States for Colorado River water and with the State of California for water from the SWP. Federal water policies and their implementation directly affect the SWP because the SWP and the Federal CVP both export water from the Sacramento-San Joaquin Delta (Delta) and share facilities such as San Luis Reservoir and some reaches of the California Aqueduct.

COORDINATED OPERATION OF CVP AND SWP

Cooperation between the Bureau of Reclamation and DWR and coordinated operation of the CVP and SWP are critical elements in the sound and effective management of water supplies flowing into, flowing out of, and being diverted from the Delta. The CVP is the largest water project in the State and plays a major role in almost all of the issues related to the San Francisco Bay and Delta estuary. Without the cooperation of the Federal Government, the following Bay/Delta issues cannot be adequately addressed: (1) water quality protection for San Francisco Bay and the Delta; (2) protection of CVP and SWP export water quality and firm water supplies; (3) CVP and SWP (and other upstream diverters) impacts on Delta and Suisun Marsh fish and wildlife resources; (4) Delta levee rehabilitation and protection; (5) San Joaquin Valley agricultural drainage, (6) south Delta water quality and water level problems, and (7) protection of the Delta Mendota Canal from unrestricted discharge of agricultural wastes.

Congressional authorization in 1986 (P.L. 99-546) of the Coordinated Operation Agreement (COA) between the Bureau of Reclamation and DWR, dated May 20, 1985, was a key step toward Federal and State cooperation. The COA allocates the responsibility for maintaining Delta water quality between the CVP and the SWP. Without such an agreement, there was no assurance that the CVP would be operated to maintain the necessary water quality in the Bay/Delta estuary.

RESOLVING DELTA PROBLEMS

The greatest opportunity for mutually beneficial cooperation between California's environmental, urban, and agricultural interests is in the Delta. The Delta is a critical California water issue. Many millions of Federal and State dollars have been spent on scientific studies and engineering reports on alternative plans to solve Delta problems. However, reaching consensus on a plan to solve Delta problems has been elusive. Extensive discussions are underway between urban, environmental, and agricultural interests to reach consensus. S. 484 provides a new framework for these negotiations.

During the past 150 years, a number of complex events have impacted the quality of water and the fish and wildlife resources of the San Francisco Bay/Delta estuary. Water exports are just one of a number of factors. It is well understood today that the status quo in the Delta is unacceptable to all interests. Fisheries continue to suffer. Drinking water quality has degraded. Delta channels scour, export capabilities are limited, and precious stored water supplies are wasted.

The present operation of the State and Federal pumping plants in the Delta is an unacceptable situation for everyone interested in protecting Delta values and meeting the water needs of more than two-thirds of the people of the State. Construction of Delta transfer facilities and modification of pumping plant operations would move us a long way toward resolving all of these problems.

Delta water quality is vulnerable to degradation from many sources, including sewage and industrial waste discharges, seawater intrusion, agricultural wastewater within and upstream from the Delta, urban stormwater runoff and recreational activity. This vulnerability is of critical concern to public agencies who export water from the Delta to supply drinking water to two-thirds of the State's population. S. 484 should be amended to incorporate the need to protect Delta drinking water from agricultural drainage.

Resolving fishery and waterfowl issues in the Delta and upstream will require the cooperation and coordination of many Federal and State resource agencies. S. 484 provides the authority for the Department of the Interior to protect and enhance the fish and wildlife resources, however, the balancing between environmental, urban, and agricultural demands of the CVP should be carefully considered in modifying the purposes of the CVP authorization.

RECLAMATION WASTEWATER AND GROUNDWATER STUDY ACT

Mr. Chairman, I would also want to take this opportunity to thank you for reintroducing the "Reclamation Wastewater and Groundwater Study Act". That legislation is very farsighted and will greatly assist us in southern California in meeting our water needs through environmentally beneficial reclaimed water and wastewater reuse projects.

We have embarked on a very ambitious reclaimed water development program in the West and Central Basin area. The LA/West Basin Hyperion reuse project has received strong community and environmental support. Your legislation will greatly assist us in the financing of this LA/West Basin Water Reclamation Program.

Mr. Chairman, thank you for the opportunity to testify today and the West Basin Municipal Water District and Central Basin Municipal Water District offer our assistance and support for your far reaching and bold new approach to the management and operation of the CVP for the benefit of all California.

Senator **Bradley**. Thank you very much, Mr. Atwater.

Mr. Cohen.

STATEMENT OF ANDREW COHEN, DIRECTOR, EAST BAY MUNICIPAL UTILITY DISTRICT

Mr. **Cohen**. Senators and Mr. Lehman, thank you for asking me down here to speak before you today. I am the Director of the East Bay Municipal Utility District, one of the largest urban water agencies in California.

My district has not yet had a chance to review S. 484, so my comments today will reflect my own views and not the official district position.

My water district provides water to over 1.1 million people and 35 cities and communities on the eastern side of San Francisco Bay. Like the CVP my water district dams and diverts water, surface water from the waters of California, and like the CVP my water district has been charged with damaging fish and wildlife in California.

As a director of this district I find myself in an unusual position which may be instructive. Before I was elected I can imagine my current staff describing me as a rabid, foaming at the mouth environmentalist. I had done some consulting work for various environmental organizations on water policy, I had run some environmental organizations, I started a couple. And in my spare time I got involved with the affairs of the water district that I am now a director of, mostly by criticizing their actions. In fact a couple of years ago I stopped them from building a dam that I felt was unnecessary.

So, I now find myself in a very interesting spot. On the one hand as an environmentalist I would like to see California's rivers and streams run forever wild and free, un-dammed. On the other hand I have a responsibility to supply water to over a million people.

This is not an easy balancing act to achieve. But, my water district has over the years I think set the stage fairly well for trying to make this kind of balance.

In 1983 and again in 1990 my district sponsored the California Urban Water Management Planning Act, a law which requires all urban agencies above a certain size in California to develop and adopt water conservation plans. We have a fairly good water conservation plan ourselves, although I expect we will be improving it over the next couple of years. It has many components, including the distribution of free low flow shower heads to residential customers and other devices. We work with commercial and industrial usage by a system of water auditing to help reduce their use. We have worked the landscaping industry. And we have developed a model landscape ordinance that we are trying to get implemented that will restrict the amount of lawn area allowed and require low water use plantings in all new construction.

As a result of these efforts and other efforts that we have made our water district has not increased its water use since 1970. Despite the fact that there has been considerable urban growth in our jurisdiction over the past 20 years.

We also have seen in these years of drought the importance of having a sound method of year-to-year water management. My district has an explicit policy and at the beginning of each year we sit back and say, what if the next winter is a critically dry year throughout the winter? How much water do we need in our reservoirs in order to get through that winter, through the following year and on into the year beyond so our reservoirs could start to fill up? And then we take whatever steps are necessary to make sure that our reservoirs stay full enough to achieve that goal.

As a result of this during this drought when many agencies in California were gambling on rain, including the Central Valley Project, we were planning ahead and cutting back on our consumption, starting in 1987 and every year of the drought. And as a result this year when the State and Federal Water Projects have cut off their deliveries to many of their customers, and when many bay area agencies are looking at cutbacks of up to 50 percent and even more, we are looking at cut backs of maybe 25 percent, maybe less, because we have conserved our water over the past 4 years.

Finally our district is beginning to come to grips with an effort to restore Fish and Wildlife on the Mokelumne River, the river from which we get our water supply in the Sierra Nevada.

As part of the long term water study effort we are looking at restoring spawning gravel and spawning beds within the river, we are looking at restoring riparian habitats, we are considering rebuilding a dam and reservoir, which is a major barrier to salmon migration on the river. And the hardest thing of all, we are trying to find additional flows for fish in the river.

This is the part of balancing which puts us in direct conflict with the needs of our customers, and it is very difficult to do, and especially difficult in a drought year.

But, this past winter we did manage, under an agreement with the Department of Fish and Game, to double the amount of water that we release to this river above the amounts that had been required under State regulations.

None of these things come without costs. One of the things that I learned as a rabid environmentalist is there is no such thing as a free lunch. Our customers pay for this, they pay in terms of an increased rate, they pay by restrictions on the way they can use water, they pay in terms of what kinds of landscaping they have. Not all of them are happy about this, some of them are quite outraged over the thought that what they consider their right to cheap and free water, their right to the lifestyle that they choose could in any way be obtained by the needs of fish and wildlife in California.

But, I and my board members believe that this is a responsibility of our water district. That we are responsible for the management of our watersheds in a way that will protect the biological productivity of those watersheds, and that we have an obligation to do whatever we can to mitigate the damage that our dams and divergence have caused the rivers of California.

Let me leave you with two thoughts and to how this many relate to the Central Valley Project Improvement Act.

First the cities are doing their part. We may be a little bit out in front of what the other agencies are doing, but there has been movement in this direction. The cities are developing and implementing water conservation plans, we are working with other urban agencies to develop a list of best management practices and water conservation, which we expect water agencies across the State will adopt and implement. And there has been quite a bit of movement in other ways in developing sound water management among the urban agencies.

I see considerably less movement among the agricultural areas, and particularly with the Federal portion of agriculture in California, the Central Valley Project.

It is going to be very hard to maintain the momentum in the urban areas if we do not get agriculture coming along, and it is going to be very hard to do anything overall in California since agriculture uses 85 percent of the developed water supply in California.

Finally if you do pass this bill you will be putting the Central Valley Project in much the same position that I myself find myself in. Although we have come to it in very different directions.

The Central Valley Project will have to temper its traditional dedication to providing its customers with free and cheap water with newly delineated responsibilities to protect and to restore fish and wildlife in California. This for them will be a difficult balancing to achieve too. But, as the East Bay Municipal Utility District has been showing it can be done. And we need to do it if we are going to protect the economic and the environmental health of the State of California.

By passing this bill you will change the role of the Federal Government from being one of the major obstacles to sound water management in California to being one of the leaders on this issue. And I hope you do pass this bill because we need your help.

[The prepared statement of Mr. Cohen follows:]

PREPARED STATEMENT OF ANDREW COHEN, DIRECTOR, EAST BAY MUNICIPAL UTILITY DISTRICT

I'm a Director of the East Bay Municipal Utility District, one of the largest urban water agencies in California. Since my District has not yet had an opportunity to review the proposed Central Valley Project Improvement Act, my comments today will reflect only my own views, and not an official position.

The District provides water to over 1.1 million people in 35 cities and communities in Alameda and Contra Costa Counties. Like the Central Valley Project, the District has dammed rivers and diverted water in order to serve its customers, and has been criticized for harming fish and wildlife that are dependent on free-flowing waters.

Before I was elected to the Water District, I had been described as a stark, raving environmentalist. I had an advanced degree in environmental and energy analysis, I had worked for several environmental organizations, and in my free time I had involved myself in the affairs of the Water District, eventually organizing a successful lawsuit to stop the District from building a dam that I believed was unnecessary.

I mention all this so you'll understand the very interesting position I find myself in today. As an elected Director of this Water District, I have to find a way to balance my desire to protect and restore California's rivers and streams, with my responsibility to provide a reliable supply of drinking water to over one million people. It's not always an easy balance to make, but it can be done.

Our District has worked to meet this challenge in several ways. In 1983 and again in 1990 we sponsored the legislation that created the California Urban Water Management Planning Act. This law requires every urban water agency in California to develop and adopt water conservation plans.

Our own extensive conservation program includes the distribution of free low-flow showerheads and other water saving devices to residential customers. We've produced educational materials and run an in-school program on water awareness since 1975. In our water auditing program we work with industrial and commercial customers to reduce their water use. We've had a long working relationship with the landscape industry, developing guidelines on water-conserving landscaping and a model landscape ordinance that restricts the area of turf allowed and requires low-water-use plants in new construction. As a result of these and other efforts, our District has not increased its water use since 1970, despite continued urban growth.

We've also developed an aggressive water reclamation program, using both our own treated wastewater and wastewater from neighboring districts to reduce our need to divert water from California's rivers. We're currently working with the Chevron-Richmond oil refinery to replace half of its cooling water supply with reclaimed water.

Perhaps most importantly, the recent drought has dramatically demonstrated the need for sound water management. Our District has a policy of explicitly analyzing our water supply situation at the beginning of each year, and taking whatever steps are necessary to maintain enough water in our reservoirs to get us through a following year of severe drought. While other agencies, including the Central Valley Project, were gambling on rain, we planned ahead and began reducing our consumption. We cut back in 1987, from the very beginning of the drought, and have continued to cut back on water use for the past four years. This year, while the state and federal projects have shut off deliveries to many of their customers, and while other agencies in the Bay Area are looking at cuts of up to 50 percent and more in their water use, we've managed to save enough water in our reservoirs so that we're planning for cuts of only 25 percent or less from pre-drought levels.

Finally, we're working to improve conditions for salmon and steelhead in the Sierra Nevada river from which we take our water. As part of an overall study of our water supply, we're considering ways to improve spawning and rearing habitat in the river, including rebuilding a dam and reservoir which is a major barrier to salmon migration. We're also looking for ways to increase the flows in the river, which is probably the hardest balancing of all, especially during a drought. But this past year, under an agreement with the California Department of Fish and Game, we did manage to release double the amount of water that had been required for fish flows in the river. And if possible, we will try to increase that further.

All of these efforts, from water conservation to improving fish habitat, do impose costs and burdens on our urban customers. But we believe these efforts are a proper part of managing our water system, and that we have a responsibility to do whatever we can to mitigate the damage our dams, reservoirs and diversions have done to the rivers from which we take our water.

Now what does all this have to do with the bill before us, the Central Valley Project Improvement Act? Two things. First, the cities are doing their part to more carefully manage their water systems. True, some are better at it than others—our District may be a little bit out in front of some of the other urban agencies—but on the whole the cities have gone further on this than agriculture. We really need agriculture, and in particular the Central Valley Project and its customers, to do their share.

Second, if you pass this bill, you'll be putting the Central Valley Project in the same position that I'm in, although we'll have arrived at it from opposite ends of the spectrum. I have to reconcile my long-standing ardor for the protection of the environment with my new responsibility to provide water for over a million people. The Central Valley Project, on the other hand, will have to temper its devotion to its agricultural clients with its newly delineated responsibilities for the protection and restoration of fish and wildlife. This is a difficult balance to achieve, but as the East Bay Municipal Utility District is showing, it can be done. And it must be done, if we are to maintain the environmental and economic health of the State of California. This bill will make the federal government a leader in this effort, instead of a major obstacle.

Senator **Bradley**. Thank you very much, Mr. Cohen.

Mr. Lehman.

Mr. **Lehman**. I appreciate what you had to say, Mr. Cohen. I would disagree with you on the extent to which agriculture has been involved in water conservation, and I would be happy to supply you with the facts as best as I know them.

But, we have—And I believe that everybody is trying to conserve right now, obviously. We are in a serious situation and everybody is responding to it. And we are having to take 100 percent reduction of our State water and a 75-percent reduction of our Federal water. We are conserving. And beyond that tremendous rights have been made in agricultural practices in my life time. I mean, when I was a kid there was no such thing as irrigation. We flood irrigate everything. Now you hardly see flood irrigation.

One of my criticisms of all the drought packages around trying to—I do not think we are putting enough emphasis on new technology to develop crops that use less water, and applying water to crops that is more efficient. I think our water system is deficient, that it transfers water in a very inefficient manner and applies it in a very inefficient manner. And all that takes money, and frankly, enough money has not been there on the part of the Federal or State Government. What money is there is there by the water districts to do that.

In addition, underground recharge of designing the technology that has been on the exploding of use. We have a cheap place to put water, where nature meant to do in the first place, under ground. The technology is almost there to do it, we ought to be doing it in the good years so that the bad years we can pump from aquifers.

As you say, East Bay gets their water from the Mokelumne River, even my district. My district supplies water to Los Angeles, we supply water to San Francisco as well, and now our water is also going to East Bay.

So, we are not just taking all this water pouring it on our crops. We are sending our water to you to use, and you have been using it.

At the same time that water that you take and that water that San Francisco takes it goes through a pipe, and it does not do any benefit for fish, it does not do anything for the salt water intrusion.

You are part of the same problem that the CVP is accused of. And the difference is here that you are telling us that you are taking steps to do things, and you are saying, we have to be mandated to do things because we are not.

But, if someone told you that you are not going to have that water 2 years from now unless you take a 10-percent reduction I do not think you would think too kindly of it.

Mr. **Cohen**. Shall I respond?

Mr. **Lehman**. Yes, I would like to know what you have to say.

Mr. **Cohen**. Let me agree in part with you and disagree in part with you.

I applaud the efforts that agriculture has done in water conservation. Its conservation efforts this year, however, let it be clear they are cutting back because the water is not there and because the system has been mismanaged over the previous few years.

But, I do agree, agriculture has done some work on water conservation and I think it has been a good effort so far. Reasonable people may disagree about what is an adequate effort.

There are other aspects to water management that I am concerned about and you raised one of them. The possibility of using ground water recharge. I think the record is fairly clear that in most areas of California agricultural interests have been opposed to ground water management efforts.

Basinwide adjudications are the kinds of things that are needed to prevent overdraft from happening and stop further overdraft from happening in California.

Our district is interested in engaging a conjunctive use project and that cannot be done until agriculture gets together on ground water management.

Another issue is what I mentioned, sound water management on a year-to-year basis. The projects I think provide a full water supply for many years. I hope in the future they will be better.

Finally you asked about how would I feel about having our water supply taken away, some portion of it in order to take care of some wildlife problems. That will be a problem that we will have to deal with. I think it is a difficult balancing as I said early on. We are trying to make it. In fact we are trying to look for water to get back the fish.

If the judgment be made that the fish and wildlife need a certain percentage of the water from water uses across the State of California we will work with that decision.

Mr. **Lehman**. I appreciate that.

Senator **Bradley**. Let me, if I could, Mr. Atwater, in your testimony you say that the West Basin Municipal Water District and

Central Basin Municipal Water District support the policy principles in that 484 is a key component to solving California's complex water resource problems.

What are the principles as you see them that you are supporting?

Mr. **Atwater**. Well, certainly the idea that the authorized service areas of the CVP ought to be State-wide.

Senator **Bradley**. So, the first one is that water with the CVP should be allowed to be sold outside the Central Valley?

Mr. **Atwater**. That is correct. And in part that was attempted in H.R. 3113, but there were some legal complications in the way that was crafted.

Secondly, and speakers have already talked on it, I certainly support the ideas of a serious study. It has certainly been talked about for 30, 40 years about either joint operation or merging the operations of the State Project and CVP system.

Certainly I support the fish and wildlife protection goals in the idea that the Federal Central Valley Project supplies should be given greater priority to, for example, urban areas.

Let me show you an example in the bay area. When you look at the San Jose area, and unfortunately today you see the county with, and things may have changed in the last 2 weeks with the storms, and hopefully they have. But, where the CVP allocated Santa Clara County a 25-percent supply, the State Project only gave them a 10-percent supply. The local reservoirs are empty, and if they pump their ground water wells any harder they have problems.

That is one where I think certainly the Secretary of the Interior and the Bureau of Reclamation had an opportunity to look at under the emergency provisions of the CVP contracts they could have immediately said, you are going to get more water than a 25-percent supply. And also there are some problems with moving water through the State Project facilities, and all those legal complications.

But, to me that is a clear policy priority that I know Congressman Lehman was at the hearing, but the House Interior Committee issues like that were raised. The policies and priorities in allocating the CVP during this drought, certainly they are not as well in tune with the needs as I see them today.

Senator **Bradley**. I would like to ask both of you a series of questions about the bill itself.

Let us take the section on limitations on contracting. An element of that is of the uncommitted million acre feet of water in the CVP. We said that 100,000 would be set aside essentially for urban uses.

Do both of you support that?

Mr. **Atwater**. Well, certainly I would like to see more. When you look at Southern California and the 15,000,000 people in Southern California——

Senator **Bradley**. I know it is not much. But, the idea is do you support the set aside of 100,000 for urban use?

Mr. **Atwater**. Certainly.

Senator **Bradley**. Pardon?

Mr. **Atwater**. Certainly.

Senator **Bradley**. Mr. Cohen?

Mr. **Cohen**. I see that as a reasonable trade-off needed to bring cities on board of this. I am concerned about urban growth. Aside from my role as a water district director I do not think we need the water in our district, but I think that it is a small portion of the water and reasonable to supply it to cities.

Senator **Bradley**. Another aspect of the bill relating to contracts of course was discussed a number of times this morning and mischaracterized. And that is when the 40-year contract expires that you can get a renewal of the contract, but you must agree to set aside a portion of the water for fish and wildlife. And the basic rule of thumb is get a 10-year contract and above 10 years for every additional year you set aside an additional 1 percent. So that if you get a 20-year contract you are getting a 20-year contract guaranteed, so it is bankable, for 80 percent of the water that you previously received. Guaranteed. And 20 percent would then be used for fish and wildlife.

Does that make sense to you?

Mr. **Atwater**. I think those concepts, there are other examples of other bureau projects in the State of Washington and in Utah with the Central Utah Project. Those types of approaches I think certainly make sense.

Senator **Bradley**. So, they have been used well other places.

Mr. Cohen, do you support that?

Mr. **Cohen**. Yes. What you are doing there is you are offering something in return for certain conditions. There is not exactly a mandate in here as to whether they want a long term contract, and I think that is the way to move them.

Senator **Bradley**. Also under that related to that section, and that is the Federal Government's willingness to pay 50 percent of the cost of conservation measures that farmers would take if they chose to renew by 1994.

Does that make sense to you?

Mr. **Atwater**. I would like to have it apply to urban areas too.

Mr. **Cohen**. I am sure my staff will want me to say the same thing. But, yes, I think it is a reasonable measure.

Senator **Bradley**. Okay. Then the section of the bill that deals with water management and conservation, we say in the bill very clearly that water transfers shall be governed by State law. And we are explicit that State law shall determine water transfers.

In other words, we might allow a farmer to sell water or a district to broker or sell water. But, if the State of California desires to reserve "X" million acre feet for agriculture it of course is authorized to do so.

So, do you support that approach, Mr. Cohen?

Mr. **Cohen**. Yes.

Mr. **Atwater**. Yes, I do. The only concern I have of policy perspective is the line to allow farmers to retain full profits. I think there ought to be some concern.

In my service area we represent some very low minority income areas. The City of Compton, for example, and I am concerned that certainly San Francisco or Beverly Hills can buy out all the water, but what do the people do in Compton?

Senator **Bradley**. Well, I think that is a very good point, and that is why we will go to the next section of the bill under water management. Which says, when there is a sale that the difference between what was contracted say at $60 an acre foot, and what was sold say at $300 an acre foot, there will be a 25-percent charge. You either will give up 25 percent of the water or pay 25 percent of the increase.

To get at this problem that money might then be available for economic mitigation issues in the Central Valley, or Fish and Wildlife, or whatever.

But, the idea is, yes, there is a public interest there that will be served by taking some of that rent, so-called, and applying it for other public purposes.

Does that make sense to you?

Mr. **Cohen**. Yes, in general. But, again, in the language in the bill I do not think it solved the problem. And I articulated that it is certainly something, the basic concept I think.

Senator **Bradley**. The farmer who sells and makes a lot from the sale has a certain charge that he gives back to the public. That is the basic theory behind it.

Does that make sense to you, Mr. Cohen?

Mr. **Cohen**. This is another part of the bill where you are offering the farmers something but putting certain conditions on it. You are giving them essentially a new property right in order to transfer and sell that water. And it is perfectly reasonable putting conditions on it.

One thing I would add is in the use of those funds for fish and wildlife that we direct the Central Valley Project to do its best to use them in ways that would ameliorate some of the economic hardship of towns in the Central Valley. Some of the secondary effects that would come from the transfer of water.

Senator **Bradley**. I think that is a very good point. And I actually took that point from a number of the witnesses today, that there would be this need.

Let me ask you then, another section of the bill says that it is the farmer who shall have responsibility for drainage questions or the district shall have responsibility for drainage questions.

Does that make sense to you?

Mr. **Atwater**. Well, I think in practice over the last 6 or 7 years a lot of Federal studies and effort, but that the drainage responsibilities in practice now have become a local irrigation and district farmer responsibility because of the lack of local consensus to finish the San Luis drain.

So, in effect I think you are catching up with the reality in the San Joaquin Valley, and it is that neither the Federal Government or the State is going to complete the San Luis drain.

Senator **Bradley**. Mr. Cohen.

Mr. **Cohen**. In general it makes sense to me, although I have not reviewed the implications part of this bill.

Senator **Bradley**. In the last part, related to conservation, it requires much more thorough metering of water use, both ground water and surface, so that we can begin to get some sense of how it is used.

Does that make sense to you?

Mr. **Atwater**. Certainly. In Southern California I would like to point out that most of the ground water basins are adjudicated and all well waters metered, and of course, every city in Southern California has meters. So, it is nothing new in Southern California.

Senator **Bradley**. Mr. Cohen.

Mr. **Cohen**. I certainly support metering of ground water. As I read the bill, however, I did not see that there was any requirement that the CVP go out and read those meters or do anything with the information once they have it.

Part of the consulting work I did in the past was of your reclamation activities in Utah, in Central Utah Project, and my sense is that if you do not spell it out for them they are more unlikely to get into the habit.

Senator **Bradley**. So, you think we ought to not only require the meters, but we ought to require that they read the meters. That is a very good suggestion.

Mr. **Cohen**. And the information could be made public in some way and should do something with it.

Senator **Bradley**. Let me ask you on the fish and wildlife side of this. The bill provides that the secretary shall operate the CVP for fish and wildlife, and directs the Secretary to provide equitable treatment for fish and wildlife with other project purposes.

Does that make sense to you, is that do-able?

Mr. **Cohen**. It is essential and certainly it is do-able. Difficult, but that is where we have to move.

Senator **Bradley**. Mr. Atwater.

Mr. **Atwater**. I think certainly that the balancing needs to be achieved between the different competing needs for the Central Valley Project. And I think earlier speakers talked much about a lot of the work on the San Joaquin and Sacramento River. Earlier in 1984, Congress authorized the Trinity River restoration. I think there are both good examples and approaches to reaching that kind of problem zone.

Senator **Bradley**. Then the section that deals with the restoration fund. The governing body would be a seven-member board that would be appointed by Californians, and they would be basically making the decisions related to the restoration trust.

Does that make sense?

Mr. **Atwater**. I think it would give better decisions in the long run than if it is a California decision making board.

Mr. **Cohen**. I agree with Mr. Atwater. I think it is an exciting way to set up management for this fund.

Senator **Bradley**. Now, in addition everyone has talked about mitigation, but nobody has really talked too much about the money, how do you get the money to do this?

Under this bill of course there is a cap put on the amount of financial liability that districts in the Central Valley have for mitigation.

The fear that I heard last year as we talked about this was that there is a fear of unlimited liability. So, we put a cap of $30 million annually and from power and water sales, not just water, but power sales, which are about 150, 175 million annually. And the question is, does the cap make sense to you? And the number of course is adjustable based upon what the economic numbers are after you begin to work the thing through.

But, the question is, does the idea of a cap for financial responsibility make sense to you?

Mr. **Cohen**. I think the need to provide some certainty as to us is important. As part of the whole package I would support a cap if it increases with inflation. And my feeling is that for power I am not sure this cap is adequate.

Senator **Bradley**. You are not sure it is adequate?

Mr. **Cohen**. It may be important to take a look at what the cap is on water sales and what the cap is on power. And I think that my census from studies of the Central Utah Project is that the power sales have the capability to provide considerable funds, and in so doing how about the cultural users.

Senator **Bradley**. I see. So, you would say use the power side to subsidize or reduce to the commitment on the agriculture side.

Mr. **Cohen**. I think that might be a way that would help to move this bill.

Senator **Bradley**. Okay. Mr. Atwater.

Mr. **Atwater**. Well, the only prospective I think is has the person been involved in the State Project Administration there is no cap. And all new or future obligations for Fish and Wildlife Protection get rolled right into the State contract billing system. And from that prospective certainly both the agricultural contractors and urban contractors in the State Project have a different standard within that cap.

Senator **Bradley**. Mr. Atwater, if I could, in your testimony you said that you thought that there would be severe shortages in the next decade.

Can you explain what you mean by severe, do you mean severe water shortages? We are in a 5-year drought right now, I mean, what do you know that this subcommittee does not know?

Mr. **Atwater**. Certainly from a Southern California prospective I think from the San Joaquin Valley who received most of the water that is exported south of the Delta. It is very unlikely unless we are very fortunate to have above normal very wet years that you will meet the normal requirements for the San Joaquin Valley and Southern California.

I know that Southern California seemed a little bit better. This year we are fortunate because the Secretary of the Interior is going to allow the Metropolitan Water District to take a full aqueduct from the Colorado River. But, we are living on borrowed time. And as Congressman Lehman alluded to earlier the City of Los Angeles is in his district, Mono Lake litigation agreements within Inyo County, the City of L.A. supplies roughly half of what they were a decade ago. And on the State Project I did talk about my testimony.

What the State Water Plan suggested 2 years ago was going to be our need in the year 2000 is what we had this year. The State Project cannot meet those demands except for 20 percent of the time.

Senator **Bradley**. So that the way you look at it with 9 million more people coming into California in the next 20 years it is going to be pretty difficult to deal with what are the water realities of the State. No dramatic increases in new supplies. You have to use the water more efficiently as I hear each of you saying.

Mr. **Atwater**. Correct.

Senator **Bradley**. And the real race is, will you be able to get enough out of water conservation to take account for the increased demand that will come from population and come from bumping up against some very serious legal requirements on fish and wildlife. And there is not an easy answer to that question.

Mr. **Atwater**. That is certainly true.

Mr. **Cohen**. There is a lot more than water reclamation to meet these issues. There is water conservation, there are water reclamation records, there are better management measures, there is use of ground water storage and recharge without having to build new projects.

In looking at all of these I believe that our district, even though we are currently projecting considerable growth over the next 30 years, I think it may be possible, and we are going to be debating this at our district, as to whether we can commit to not increasing our water use through the year 2020, as we have not increased it since the year 1970. Despite the fact that we do expect a lot of people to be moving into our district.

Senator **Bradley**. One final question from Congressman Lehman.

Mr. **Lehman**. Thank you. And on this general point.

We have two issues here we are really discussing. The San Joaquin River and the State of California. And the San Joaquin River's condition is deplorable, no question about it. It has to be changed. And what has happened is a tragedy. There is no water in the river during most of the year. And agriculture is going to have to put more water in the river, it is just a question of how that is going to be done, how the constellations line up, what the circumstances are, what it costs. That is the reality and that is what I am telling you. Now, we can quantify that, we can deal with that depending on how far you want to go.

The other question here is, what about the rest of the water? And it seems to me where we are headed then, and I am uncomfortable with this being a farm hit, with the notion that the growth in California in the future is going to be accommodated by getting rid of agriculture. Maybe not entirely. But, if you take the water from them there is going to be less of them around. And, yes, we can change some farming practices, we will try to do that. We can do a few other things.

But, the proposal to sell the water to the highest bidder is just another way to move the water from the farm to the city and to those districts that are most able to pay because they can charge the highest wage for the water and be able to get the purchase of it from the farmer. And the State is going to grow to who knows how many million people.

You anticipate then that that growth in water will come mostly from the farms?

Mr. **Atwater**. I do not. Not in Southern California. I think we will do as much in reclaimed water, better management of the ground water basins and conservation, and we will do some ocean desalinization in another 10 years.

What Metropolitan sold last year, 2.6 million acre feet, it is unlikely they will sell that much in the next decade. So, what they got last year, to put it in prospective, is probably more than you should expect in the next decade.

Mr. **Cohen**. I think we will see a combination of some water farms by various mechanisms, some of them better management, some of them perhaps retirement to some lands which perhaps should not have been in production in the first place.

I am not advocating that we destroy our agriculture in the State of California. I think we have to be careful about what we do with the agriculture. But, I think there is a possibility to move some water to other uses, and I think there is a lot of potential for freeing up new water with better management in both the agriculture and urban sector.

Mr. **Lehman**. One final point. Do you think you would be seeing the end of water development in California, do you think that is not an option?

Mr. **Cohen**. No more dams, is that the question?

Mr. **Lehman**. Water development, not always, but usually implies a dam or a increased capacity in the delivery system.

Mr. **Cohen**. I think we will see some projects of some kinds done. I think we will see more conjunctive use projects, more ground water storage projects, we may see some more dams. I think we are going to see very few more dams, however, they are getting harder and harder to build. And I think the smart money in the future is on better water management and not trying to build more dams.

Mr. **Lehman**. My guess is you are right. But, people in the State ought to know that we are pushing up against the wall here, we want all this good life and every time we step our way up, every time we send more water to Los Angeles, and I am using Los Angeles in a generic sense, meaning also to California, it expands beyond the water that you send so you need more water. Farmers have done that too, that is our basic problem in this State, and until we come to grips with that this thing is just going to recur.

Mr. **Cohen**. I would be very pleased if you would introduce some kind of growth control legislation. I would be happy to work with you on that.

Mr. **Lehman**. I introduced legislation in the Legislature to outlaw any new land coming into production for agriculture by simply saying you could not put a well on it.

So, I think that the problem is on our side. But, the reality is that there is not going to be anymore land coming into production. The economics of it are not feasible. There is going to be a lot more urban growth whether there is water or not. Build the houses and wait for the water.

Senator **Bradley**. Let me thank you. Let me say that the premise of this hearing and certainly 484, is that there not be a taking of water. There is no taking of water. This is a voluntary decision that will be made by the farmer or the district, and it will be subject to the State because State law will predominate here. And if the State believes that too much water is being allocated away from agriculture to urban areas it would have in its capacity the right to restrict that.

Another point is simply that our ability to resolve this question in a way with all sides working together is going to be very important given what could be out on the horizon for the State of California in the next generation. And I say this not as somebody who has a political interest in this, but as someone who simply looks at what is. That does not discourage the people who have been here today testifying, or who are elective representatives should not be saying what they are saying. Of course they should be saying what they are saying.

It simply says that here we have very deep divisions that have been built up over many, many years, and we have to begin to see the other persons point of view if we are going to be able to get through this period. And I frankly think that there is enough good will out there.

I have been to Fresno and I will go back to Fresno. And I hope that all of you will be available for further hearings and discussions. I think you have contributed a great deal to this morning, as have all the witnesses.

We will reconvene this afternoon at 2:30 where we have two very important panels, it is kind of the grand divide.

The first panel will be those who are interested in the environment, fish, wildlife. The second panel will be those individuals whose economic interests are most directly affected by all of these decisions that we will be taking. And we look forward to hearing from both of those panels this afternoon beginning at 2:30.

The subcommittee is in recess.

[Whereupon, at 12:17 p.m., the subcommittee was recessed to reconvene at 2:30 p.m. the same day.]

AFTERNOON SESSION

Senator **Bradley**. The subcommittee will come to order.

Let me welcome everyone back to the afternoon session of the hearing of the Water and Power Subcommittee of the Senate Energy and Natural Resources Committee, and the subject of S. 484.

I am very pleased this afternoon that we will have two distinguished panels. And let us begin with the first panel.

We have Mr. Norman Livermore, former Secretary of Resources for the State of California; Glenn Olson, Vice President, National Audubon Society; Nathaniel Bingham, President, Pacific Coast Federation of Fishermen's Associations; James Paulk, United Anglers of California; Stephen Suagee, Attorney, Hoopa Valley Tribe; John Winther, Delta Wetlands, Inc.; Harrison Dunning, Chairman, the Bay Institute of San Francisco; and Tom Graff, Senior Attorney, Environmental Defense Fund, Oakland. I hope there are enough chairs at this table.

Let me welcome you to the subcommittee. And let us begin with Mr. Livermore and then Mr. Olson.

I understand that there is a little bit of a time constraint, and the committee will understand if some of you have to leave.

Mr. Livermore, the floor is yours.

In order to get through all of our witnesses this afternoon if you could I would like you to try to limit your presentations to about 7 to 8 minutes.

Mr. **Livermore**. Thank you, Mr. Chairman. I was told I only have 5 minutes, so I will try to keep it in that limit.

Senator **Bradley**. Well, that is staff, Mr. Livermore. I am more generous.

STATEMENT OF NORMAN B. LIVERMORE, FORMER CALIFORNIA SECRETARY OF RESOURCES

Mr. **Livermore**. I will skip the second paragraph of my prepared statement, because it is largely biographical.

Mr. Chairman, in reading S. 484 and your cogent analysis of it I do not see a single section with which I do not heartily agree. And I fervently hope it becomes law.

Rather than speak to the specifics of your excellent bill, in the short time available to me I would like to talk in broad terms on a few subjects.

First the Delta. On December 1, 1970, I gave a talk in San Francisco, which among other subjects outlined the State's position on Delta water requirements.

This was spelled out in detail in my letter of April 28th, 1970, to Secretary of Interior Hickel. And I quote from that letter.

"In a dry year that might cause shortages to water agencies to the south of the Delta, the water quality needs of the Delta will have priority."

I note with interest that currently the State Water Resources Water Control Board is still studying this problem. Was my official 1970 statement not clear enough?

Next, economics and the rebuttable presumption. Being a business man both by education and experience have consistently held that economics deserves equal weight with the environment.

It appears to be, Mr. Chairman, that your legislation will go a long way towards regressing the present situation that when the chips are down economics almost always prevails.

This is not unlike the situation that existed prior to 1967, when in the case of California Parks versus Freeways, Park proponents were ridden over rough shod. Legislation we passed in 1967 gave Parks a rebuttable presumption which resulted in their having even standing with highways before the law. Should not the same equality be given now to fish, wildlife and white water?

Deep ecology. This subject has until recently been too deep for me. However, recent study influenced by such publications as The End of Nature by Bill McKibben has given me a better understanding of it.

To quote from him, "Some few people have begun to talk of two views of the world. The traditional man-centered anthropocentric view and the biocentric vision of people as a part of the world."

Whether you like it or not I predict that in the future we will be taking more heed of this latter view, as proven by the increasingly successful movement for the preservation of wilderness, pristine beauty and the inherent rights of fish, wildlife and the plant world.

Mr. Chairman and members of the subcommittee, I commend you for taking an important lead to help solve the critical water supply problem we have in California and the west.

To quote from a recent publication we know that, "Total water use exceeds average stream flow in 24 of the 53 western water resource regions. A difference made up by mining dwindling ground water stocks and importing water."

It appears to me, Mr. Chairman, that it is high time that we urge action along the lines of your bill. It is time that all of us unite to put an end to the pesky arguments that have existed for so long. White water versus flat water. Fish versus diversion canals. Wild rivers versus dammed ones. Water basin transfers versus natural flows. Indian rights versus other citizens rights. Metered water versus free water. Phoney benefit cost ratios versus honest ones. Market water pricing versus subsidized pricing. Agricultural rights versus municipal and industrial rights. Pure water versus agricultural return water. Ducks and salmon versus rice and cotton. State Water Project rates versus CVP rates; Solano County versus Napa County and Mono Lake versus the City of Los Angeles.

Some while ago while participating in a panel discussion of California's water problems I had the pleasure of viewing an excellent video which was produced by the agricultural community. In this connection I cannot think of a more fitting way to close my remarks than to quote fellow panelist James W. Boswell on that occasion. He stated, and I quote.

"The California water problem is not going to go away. The status quo is unaccessible to all, and arguing with shallow rhetoric is not going to solve the problem. Once all of us, north, south, agriculture, business and consumers are willing to discuss this rationally we can elevate the issue in a much more enlightening and intelligent manner."

I thank you.

Senator **Bradley**. Thank you very much, Mr. Livermore, for your testimony.

Mr. Olson.

STATEMENT OF GLENN OLSON, REGIONAL VICE PRESIDENT, NATIONAL AUDUBON SOCIETY

Mr. **Olson**. Mr. Chairman, thank you for the opportunity to be here today. I am testifying not only for the National Audubon Society but also on behalf of the Nature Conservancy, the Defenders of Wildlife, the California Waterfowl Association, the Waterfowl Habitat Owners Alliance and Ducks Unlimited.

Together we make up a group called the Central Valley Habitat Joint Venture, which is a unit of the North American Waterfowl Plan, an effort to restore 120,000 acres in the Central Valley of California to wetlands, to protect 80,000 acres of existing wetlands and to provide a firm water supply for all of those wetlands.

We have been working together since about 1987. We have come up with an implementation plan, and I am here today to be able to state our strong and enthusiastic support for S. 484 as a vehicle that can help us achieve the water we need for our wetland resources in California.

We consider this to be one of the most important wildlife initiatives of the 102nd Congress, and it provides the best hope for waterfowl, fish and wildlife in California Central Valley, and we believe that the funding mechanism is both far sighted and comprehensive and fair, and it appears to remedy a problem that was raised last year, a concern by water users that it was open-ended.

The cap that you mentioned this morning, the $30 million we endorse that as a good first step, and are willing to talk about specifics or details as it goes along.

As this committee well knows over half of our Nation's original wetlands have been lost. In California the situation is much more dire. And in my testimony I have included a table that shows the fact that we had about 1850 an estimated 4.1 to 5 million acres of wetlands. We are down to presently about 290,000 acres of wetlands. About a 95-percent loss in the Central Valley of our wetlands. And yet these are the wetlands where 60 percent of the birds of the Pacific Flyway, the waterfowl ducks, swans, sandhill cranes, shore birds winter in the Central Valley. At times upwards of 20 percent of the entire continents wintering waterfowl population are found in the Central Valley. And just to put a number on that, the U.S. Fish and Wildlife Service would like to see a winter continental population of 100 million waterfowl wintering in the lower 48 States. So, that means that 20 million birds could be in California at any one given time.

Now, as many of you know for the last 10 years we have been having a severe drought situation in the prairie provinces of Canada and the Dakotas, a lot of the areas where the waterfowl breed. And so our waterfowl populations are at 30-year lows at this time for pintail for mallard, and that is the impetuous behind the Joint Venture. To come together, to try and seek mechanisms to help waterfowl populations recover so that we can have ducks and geese and swans for our kids and their kids to be able to be mesmerized and enjoy in the future.

So, for that reason we are very excited to see your legislation, which provides not only we think making Fish and Wildlife a project purpose of the Central Valley Project not only in terms of water, but also in terms of the Environmental Trust Fund or Central Valley Trust Fund that can provide maybe even some restoration money and protection money.

I also included a table in my written testimony that lays out the water supply needs for the Central Valley National Wildlife Refuges, State Wildlife Management areas and the Grasslands Resource Conservation District.

Nearly all of the remaining wetland acreage in the Central Valley is in public ownership on these 14 State and Federal wildlife areas and the grasslands private area in Merced County.

The Fish and Wildlife Service estimates that its Central Valley Refuges currently receive less than 8 percent of the water needed by waterfowl for successful wintering.

The Bureau of Reclamation typically delivers water to most refuges only in unusually wet years, when there is a surplus of water after all agricultural, municipal and industrial demands have been fulfilled. The amount and the timing of the water supplies varies from year to year.

Currently only Mendota Wildlife area has a firm water supply in an amount considered necessary for proper management for wildlife. The other 13 areas along with the Grasslands Resource Conservation District must depend on run off from interim water, under contracted customers who cannot fully use it at the time, or uncontracted firm water yield from the Central Valley Project.

At present interim water supplies are declining 5 to 10 percent annually as irrigation districts increase their capacity to use water. By the year 2020 it is estimated that interim water will no longer be available.

So, if you would look at our table we are presently getting level one water, which is 103,000 acre feet a year. The needs for the U.S. Fish and Wildlife Service and State Wildlife Refuge areas and the grasslands private wetlands area, about 80,000 acres in Merced County, are 505,000 acre feet. That means we are about 400,000 acre feet short according to the estimates of the U.S. Fish and Wildlife Service and California Department of Fish and Game. About 80 percent short of meeting the needs that we have for our existing State and Federal wildlife refuges.

Your legislation provides the much needed emphasis to get the CVP to obtain water for these wetlands on a firm, secure and long term basis.

The bill's provision to provide a so-called level two water upon enactment and level four water to all Central Valley State and Wildlife Refuges by the year 2000 is we believe among its most important actions.

This legislation creates an innovated funding mechanism to provide $30 million annually for projects that protect and restore the best examples of the Central Valley's biological diversity, its rare plants, rare species plant and animal communities and large scale natural ecosystems.

While we admire these lofty ideals it may be pragmatic, we believe, to include the specific basin-by-basin wetland protection and restoration goals of the Central Valley Waterfowl Habitat Joint Venture.

This would allow your restoration trust to take advantage of the political and biological work that has gone into the last 3 years of our group working throughout the Central Valley.

We have got specific goals for wetlands, we have got specific goals for restoration in each basin, and we would lay that out as a potential for a road map for your consideration.

You should know that the private sector is a full partner in the protection and restoration of wetlands right now. Audubon acquired 780 acres west of Modesto 3 years ago, it has now been turned over to the U.S. Fish and Wildlife Service as a first unit for the new San Joaquin River National Wildlife Refuge.

The Nature Conservancy and Ducks Unlimited are partners in an area known as the Consumnes River, restoring about 3,000 acres of wetlands. We purchased in 1989, 500 acres in Colusa that has now been restored to wetlands, taken out of rice production. We are now expanding that by another 600 acres.

Just so you know that in an all total in the last 3 years we estimated that about 11,000 acres has been restored to wetlands towards that 200,000 acre goal, 120,000 acres to be restored and 80,000 of existing wetlands.

So, let me conclude and just say that we look forward to your working on behalf of the passage of your legislation. We cannot expect wildlife to continue to exist and survive in the Central Valley under some of the situations that have occurred in the past, the Kesterson situation. The things that have happened such as the Stillwater National Wildlife Refuge in Nevada, show us that we need to be forward thinking and comprehensive in our approach, and we strongly support your bill.

I should just in finishing up say that while my remarks are limited basically to the waterfowl provisions, we served on the State Upper Sacramento Advisory Council and Action Team for the Upper Sacramento River, and strongly endorse the fisheries components of your bill and the riparian force conservation aspects that were implied.

Thank you.

[The prepared statement of Mr. Olson follows:]

National Audubon Society
Western Regional Office
555 AUDUBON PLACE, SACRAMENTO, CA 95825 (916) 481-5332

TESTIMONY OF GLENN OLSON
REGIONAL VICE PRESIDENT
NATIONAL AUDUBON SOCIETY

BEFORE THE
UNITED STATES SENATE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES

CONCERNING S.484
THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT

ON BEHALF OF

NATIONAL AUDUBON SOCIETY
DUCKS UNLIMITED
THE NATURE CONSERVANCY
CALIFORNIA WATERFOWL ASSOCIATION
WATERFOWL HABITAT OWNERS ALLIANCE
DEFENDERS OF WILDLIFE
TRUST FOR PUBLIC LAND

18 MARCH 1991
LOS ANGELES, CALIFORNIA

AMERICANS COMMITTED TO CONSERVATION

Mr. Chairman and members of the Committee, I am Glenn Olson, Western Regional Vice President for the National Audubon Society. I am speaking today on behalf of Audubon and the Central Valley Waterfowl Habitat Joint Venture of the North American Waterfowl Management Plan. The Joint Venture is composed of the following organizations: Ducks Unlimited, The Nature Conservancy, Defenders of Wildlife, California Waterfowl Association, Waterfowl Habitat Owners Alliance, the Trust for Public Land, and National Audubon Society.

The Joint Venture has brought together these conservation and sportsmen's organizations in order to accomplish some straightforward goals in the Central Valley: (1) to protect 80,000 acres of existing wetlands; (2) to restore 120,000 acres of former wetlands; (3) to secure a firm water supply of suitable quality for Central Valley national wildlife refuges, state wildlife areas, and the Grasslands Resource Conservation District. Our mission is to restore Pacific Flyway waterfowl populations (which are now at 30-year low's) as well as to sustain and enhance viable populations of all wetland-associated native wildlife.

I am very pleased to be here today to state our strong and enthusiastic support for S.485. We consider this legislation to be among the most important wildlife initiatives of the 102nd Congress. It provides the best hope for the waterfowl, fish, and wildlife of California's Central Valley. Your legislation is both far-sighted and comprehensive. The funding mechanism is innovative, fair, and appears to remedy a concern of water users that last year's companion legislation in the House was open-ended. We are anxious to see your bill passed and implemented in the near future--before it is too late to save this critical remnant of our nation's natural heritage.

As this Committee well knows, more than half of our nation's original wetlands have been destroyed by agricultural and urban development. The Central Valley of California is a striking example of this phenomenon; the once vast marshes of this area, historically estimated at 5 million acres, have been reduced to a mere remnant of 290,000 acres, representing just five percent of historical wetland acreage. (See attached table.)

The fragments of wetlands that remain in the Central Valley are of enormous value to wildlife. These wet areas are the last outpost for millions of Pacific Flyway ducks, geese, and shorebirds during migration. Central Valley wetlands provide critically important wintering grounds for over 60 percent of the Pacific Flyway's waterfowl. At times, over 20 percent of the entire nation's waterfowl are found in the Central Valley. The extraordinary decline in our nation's waterfowl populations is largely due to loss of winter habitat--such as that found in the Central Valley--although destruction of upland breeding areas and recent droughts have also played significant roles.

Much of the remaining wetland acreage in the Central Valley is in public ownership on 14 state and federal wildlife refuges. The Fish and Wildlife Service estimates that its Central Valley refuges currently receive less than eight percent of the water needed by waterfowl for successful wintering. The Bureau of Reclamation typically delivers water to most refuges only in unusually wet years, when there is a surplus after all the agricultural, municipal, and industrial demands have been fulfilled. The amount and timing of the water supply varies from year to year. Currently, only the Mendota Wildlife Management Area has a firm water supply in the amount considered necessary for the proper management of existing wetlands and facilities within the refuge boundaries. The other 13 areas, along with the Grasslands Resource Conservation District (GRCD), must depend on run-off from: (1) "interim" water--under contract to customers who cannot fully use it at the time; or (2) uncontracted firm water yield from the Central Valley Project. At present, interim water supplies are declining five to ten percent annually as irrigation districts increase their capacity to use the water. By the year 2020, it is anticipated that interim water will no longer be available. (See attached Table from the Central Valley Habitat Joint Venture Implementation Plan)

Your legislation provides the much-needed impetus to get the CVP to obtain water for these wetlands on a firm, secure, and long-term basis. The bill's provision to provide so-called "Level 2" water upon enactment and "Level 4" water to all Central Valley state and federal refuges by the year 2000, is among its most important actions.

This legislation creates an innovative funding mechanism to provide $30 million annually for "projects that protect or restore the best examples of the Central Valley's biological diversity, its rare species, plant, and animal communities, and large-scale natural ecosystems." While we highly admire these lofty ideals, it may be pragmatic to include the specific basin-by-basin wetland protection and restoration goals of the Central Valley Joint Venture Implementation Plan. This would allow the proposed "Central Valley Project Restoration Trust" to take advantage of the biological and political support already generated by the Joint Venture.

You should know that the private sector expects to be a full partner in the protection, restoration, and long-term management of the Central Valley wetlands to benefit the Pacifc Flyway. In the past two years, major Central Valley wetland areas have been acquired, restored, and protected in perpetuity by the Joint Venture's partner organizations. For example, Ducks Unlimited and The Nature Conservancy have a 3,000 acre wetland restoration project at the Cosumnes River. Audubon acquired 780 acres to start the new San Joaquin River National Wildlife Refuge west of Modesto. In July 1989, we acquired and restored 500 acres west of Butte Creek in Colusa County. We are currently expanding that area by 600 acres, which will also be restored. Right now we are beginning restoration of 550 acres in the Stone Lakes area south of Sacramento. Other major, privately-funded projects are on the horizon including a 19,000 acre project at Parrot Grant, west of Chico (spearheaded by The Nature Conservancy and Ducks Unlimited).

While I have focused my remarks on the implications of this legislation for waterfowl and wetlands, let me say that Audubon is keenly intersted in the fisheries restoration and riparian forest conservation aspects of S.484. Audubon served on the Upper Sacramento River Advisory Council and Action Team. This group was constituted by the State of California to prepare a fisheries and riparian habitat management plan for the Upper Sacramento River. Audubon endorses the conclusions and recommendations of this plan. We view your bill as compatible, though more geographically and biologically comprehensive.

To conclude, Mr. Chairman. We simply cannot expect wildlife to survive in the Central Valley under the dry, contaminated conditions that currently exist. The Kesterson biological disaster and the current crisis at Stillwater National Wildlife Refuge in Nevada, shows us what can, and will continue to happen to habitat that does not receive a consistent supply of clean water (the lifeblood of the wildlife refuges in the Valley). These refuges are at the end of the pipeline and are not getting what they need to survive. The Bureau's new mission in the Central Valley could be to revitalize rather than to reclaim. Your legislation directs the Secretary of Interior to implement changes in that direction. We applaud the Senator's progressive approach and pledge our active support in seeing it come to fruition.

From: Central Valley Habitat Joint Venture Implementation Plan

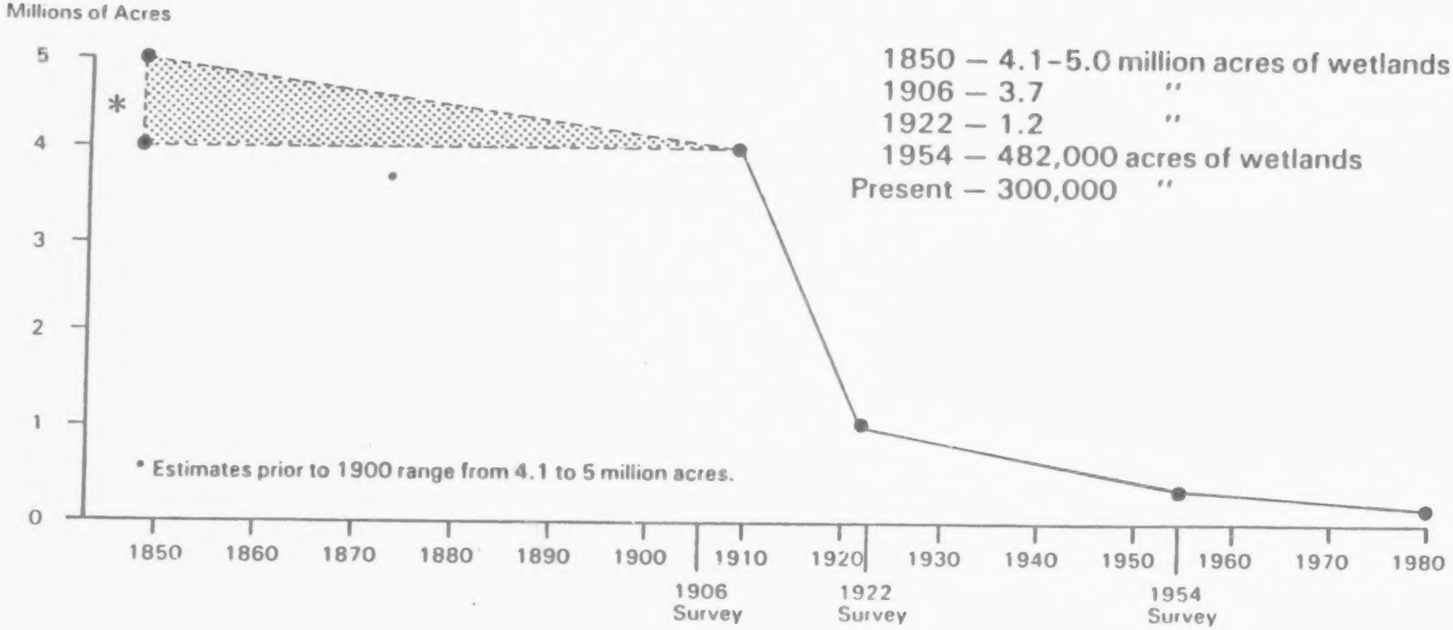
Table 6. Water supply needs (in acre feet) for National Wildlife Refuges, State Wildlife Areas, and the Grasslands Resource Conservation District, in California's Central Valley.

Basin	Area	Level 1	Level 2	Level 3	Level 4	Obj.[3] Needs
Colusa	Sacramento NWR		46,400	50,000	50,000	50,000
Colusa	Delevan NWR	0	20,950	25,000	30,000	30,000
Colusa	Colusa NWR	0	25,000	25,000	25,000	25,000
Sutter	Sutter NWR	0	23,500	30,000	30,000	30,000
Butte	Gray Lodge WA	8,000	35,400	41,000	44,000	36,000
	Total Sacramento Valley	8,000	151,250	171,000	179,000	171,000
San Joaquin	Grassland RCD[1]	50,000	125,000	180,000	180,000	130,000
San Joaquin	Volta WA	10,000	10,000	13,000	16,000	6,000
San Joaquin	Los Banos WA	6,200	16,670	22,500	25,000	18,800
San Joaquin	Kesterson NWR	3,500	3,500	10,000	10,000	6,500
San Joaquin	San Luis NWR	0	13,350	19,000	19,000	19,000
San Joaquin	Merced NWR	0	13,500	16,000	16,000	16,000
Tulare	Mendota WA	25,500[2]	18,500	24,000	29,650	4,150
Tulare	Pixley NWR	0	1,280	3,000	6,000	6,000
Tulare	Kern NWR	0	9,950	15,050	25,000	25,000
	Total San Joaquin Valley	95,200	211,750	302,550	326,650	231,450
	TOTAL	103,200	363,000	473,550	505,650	402,450

Water Supply Level 1:	Existing firm water supply
Water Supply Level 2:	Current average annual water deliveries
Water Supply Level 3:	Full use of existing development
Water Supply Level 4:	To permit full habitat development

[1] As of 1985, Grassland Resource Conservation District no longer receives agricultural drainage flows because of water quality concerns.
[2] Only 18,500 acre-feet can be delivered to the Mendota WA without modifications of existing facilities.
[3] Objective level, additional firm water needs (Level 4 minus Level 1).

HISTORICAL LOSSES OF WETLANDS IN CALIFORNIA



1850 — 4.1–5.0 million acres of wetlands
1906 — 3.7 ″
1922 — 1.2 ″
1954 — 482,000 acres of wetlands
Present — 300,000 ″

* Estimates prior to 1900 range from 4.1 to 5 million acres.

Senator BRADLEY. Thank you very much, Mr. Olson, for your testimony.

Now, Mr. Nathaniel Bingham, Pacific Coast Federation of Fishermen's Association, welcome back to the subcommittee.

STATEMENT OF NATHANIEL S. BINGHAM, PRESIDENT, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS

Mr. BINGHAM. Thank you very much, Senator Bradley.

My name is Nat Bingham, I am President of the Pacific Coast Federation of Fishermen's Associations.

I wish to thank the subcommittee for coming to Los Angeles today on this matter of extreme urgency to our State's fishing industry and the opportunity to testify.

I am a commercial fisherman, I have been one for 25 years and I have been President of PCFFA for the last 8 years.

PCFFA represents working men and women in California's commercial fishing fleet, including most of the State's salmon fishermen.

During this 15 years of existence PCFFA has been principally centered around the protection and restoration of salmon stocks and the fisheries dependent on those resources.

It is fitting the subcommittee selected Los Angeles as a site for this field hearing on S. 484. Central Valley Improvement Act, Los Angeles Basin's largest seafood consuming region in the Nation. Much of the salmon harvested offshore California's north and central coast is shipped here to supply the restaurants, seafood markets and delicatessens.

I think the important point here is that you have heard a lot today about the farmers and how they may be devastated by what is in this bill. But, I would just like to point out to the committee that we have been devastated by what this bill needs to do, by the lack of it.

This subcommittee has heard before the impacts of Central Valley Project operations on California's salmon resources have been devastating. Through 1988 California has been the largest U.S. producer of king or chinook salmon, which are the most valuable of the six species of this fish.

CVP fish destruction began on the San Joaquin River. The Friant Unit destroyed the spring-run king salmon population of the mainstem of the San Joaquin. This run numbered between 115,000 to 140,000 spawning fish annually. The run was not reduced to threatened or endangered species it was made extinct. Along with it went the historic salmon gillnet fishery of the San Francisco Bay and Delta that harvested those stocks.

On the Sacramento River the operations of the CVP's Shasta/Keswick Dams and the Red Bluff Diversion Dam have reduced winter-run chinook populations from as much as 117,000 spawners annually to less than 500. That species has now been listed threatened and our season has been reduced to address that threatened status. The fall-run kings, the mainstay of our commercial and recreational fisheries have also been affected by CVP operations on the Sacramento. Although the losses have been masked somewhat by hatchery operations. The fall-run is currently in great jeopardy because of high water temperatures in the upper river resulting from bureau operations. As the bureau has sought to reserve what little cold water it keeps in storage behind the dam for the threatened winter-run has almost nothing left to provide for our mainstay fall-run, which is what the fishery depends on.

I have quite a bit of testimony that is in my written statement about the Trinity River too. But, I think Mr. Suagee will address that issue better than I could.

CVP destruction of the salmon fishery did not end with its dams and diversions on our rivers. It extends as well to the pumps operated by the CVP and its little brother, the State Water Project, have caused untold damage to out-migrating salmon. I might add that I asked Mr. Bontadelli today before he left is any comprehensive study had ever been done as to the human caused impacts on salmon in California, and he replied he knew of no such study.

The overall impact of all of these projects or their known project-by-project in little pieces, nobody has ever put the pieces together. But, here is one little piece.

At the Glennn-Colusa Irrigation District, which is not a Federal project, Fish and Game estimated that 2,500 winter-run spawning equivalents in out-migrating juvenile salmon were destroyed. This is more than five times the present spawning run of the winter-run population. The recreational fishery outside of San Francisco Bay was shut down this spring for 2 weeks, which was estimated to save 20 adults. Where is the equity?

While the water for the fish is being cut back at the beginning of the drought there were no agricultural cut backs in water or even proposed until 1990.

You may ask, as so many in the bureau have asked, as so many in the State Department of Water Resources have asked, and so many in the Legislature have asked, why save salmon? Isn't it a question of food versus fish or people versus fish? Obviously the people have to be given priority for the water. Obviously food and agriculture have to be given priority over fish. Obviously somebody has got to be wrong.

Senator, I know you know, but, let me repeat for others testifying here today, for others in the audience and for the record.

Fish are food. The wild stocks of salmon produced in our rivers and harvested off our shores are a high-value food product, unlike alfalfa or irrigated pasture land. These salmon contain no antibiotics, growth hormones or coloring agents, it is a natural product.

Last week one buyer alone in Moss Landing received an order from Japan for a million pounds of king salmon for this season. We are not even sure we are going to be able to catch that many this year with the regulations that we are faced with for this season.

Best of all wild king salmon are unlike cotton and rice and do not require subsidized water to be grown on, and they do not require Federal price supports to go to market. The fact is we have an un-subsidized industry which up until now has been able to survive on its own.

But, with the kind of devastating cut backs we are facing I do not know. As an industry we have done everything we humanly could to protect and restore our salmon populations. We, in fact, put our money where our mouth is.

I have personally operated small salmon rearing facilities. We have taxed ourselves through a State-wide stamp program, which is doing good things for fish throughout the State, and we even went the final 9 yards and provided the environmental documentation funding for those screens that I talked a little while ago about, because the Irrigation District did not want to do it. We went in there and put up our money to fix something they should have fixed, and they are still dragging their feet, I might add.

Senator Bradley, band-aids will not work. Fundamental changes are needed in the Central Valley Project which controls 20 percent of California's water. If this State's remaining fish and wildlife is to be protected we must act now, we cannot wait, we cannot have more studies we simply must get on with the job.

In closing, California Salmon Fishery and salmon fishermen cannot wait another year for reform. Salmon fishermen are looking at options of total closures on their fisheries this year.

Some of the fish runs such as the winter-run will become extinct if something is not done about CVP operations. Salmon fishermen for the first time ever have been forced to seek drought relief, because of what has happened during the drought. They are proud people they do not want to do this.

But, the boats, and you take my boat, it is now effectively worthless. I purchased it years ago in the hope that when I sold it as a retiring fishermen that would provide me with the basis for my retirement. If I wanted to sell it right now I could not find a buyer for it, its value has been wiped out by the situation that we are in.

As you may be aware there are not programs that fishermen can readily avail themselves as for agricultural folks. We are struggling trying to survive this year because of what the CVP has done. We need reform now, Senator Bradley. We ask you for help. There are a lot of other folks out there that have other things to turn to, we only have the fishery resource to depend on. We will do what we can for the fish, we ask for your help.

Thank you.

[The prepared statement of Mr. Bingham follows:]

PREPARED STATEMENT OF NATHANIEL S. BINGHAM, PRESIDENT, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS

Senator Bradley, members of the Subcommittee, Senator Roberti, Assemblyman Costa, distinguished officials, my name is Nat Bingham and I am the president of the Pacific Coast Federation of Fishermen's Associations (PCFFA). I wish to thank the Subcommittee for traveling to Los Angeles today on this matter of extreme urgency to our state's fishing industry and for the opportunity to testify.

I am a commercial salmon fisherman operating my fishing vessel the *Ellot M* out of the port of Fort Bragg along California's north coast. In addition to being a fisherman for over 25 years, and having been president of PCFFA for the past eight years, I am chairman of the federal Pacific Fishery Management Council's Salmon Advisory Subpanel. I also serve on the Klamath Fishery Management Council, the Klamath River Task Force and the California Salmon Trollers Advisory Committee. The latter committee oversees the expenditure of funds from the multi-million dollar commercial fishermen's salmon stamp program for fish and fish habitat restoration projects.

PCFFA represents working men and women in California's commercial fishing fleet including most of the state's salmon fishermen (trollers). During its fifteen years of existence, PCFFA's activities have principally centered around the protection and restoration of salmon stocks and the fishery dependent upon those resources.

It is fitting that the Subcommittee selected Los Angeles as the site for this field hearing on S. 484, "The Central Valley Project Improvement Act". The Los Angeles Basin is the largest seafood consuming region in the nation. Much of the salmon harvested offshore California's north and central coast is shipped here to supply the restaurants, seafood markets and delicatessens. Indeed, one of the nation's largest processors and smokers of salmon—Los Angles Smoking a Curing (LASCO)—is located here. In addition to the harvest-consumption relationship the salmon fishermen of the north coast have with the Los Angeles Basin, we also share something else in common—we have both been victims of the operations of the federal Central Valley Project.

As this subcommittee has heard before, the impacts of CVP operations on California's salmon resources have been devastating. For those who think salmon come only from Alaska or Norwegian fish farms, let me remind you that the first salmon cannery on the west coast was on the Sacramento River. The first salmon fish hatchery on the west coast was on a tributary of the Upper Sacramento River (now inundated by the Shasta Reservoir). Salmon has played an important role in the coastal economies of the north and central coast of this state for over a century. Through 1988, California has been the largest U.S. producer of king, or chinook, salmon which are the most valuable of the six species of this fish.

CVP fish destruction began on the San Joaquin River. The Friant Unit destroyed the spring-run king salmon population of the mainstem of the San Joaquin. This run numbered between 115,000 to 140,000 spawning fish annually. The run was not reduced to threatened or endangered species status—it was made extinct. Along with it went the historic salmon gillnet fishery of the San Francisco Bay and Delta that harvested San Joaquin stocks.

On the Sacramento River, the operations of the CVP's Shasta/Keswick Dams and the Red Bluff Diversion Dam have reduced winter-run chinook populations from as much as 117,000 spawners annually to less than 500. The demise of this run, now listed as a threatened species, was entirely due to in-river habitat destruction—mostly that caused by CVP operations. The fall-run kings, the mainstay of our commercial and recreational fisheries, have also been affected by CVP operations on the Sacramento, although the losses have been masked somewhat by hatchery operations. The fall-run is currently in great jeopardy because of high water temperatures in the upper river resulting from Bureau operations. As the Bureau has sought to reserve what little cold water it keeps in storage behind Shasta Dam for the threatened winter-run, it has left nothing in reserve for the later natural-spawning fall-run, subjecting these fish to lethally high temperatures.

On the American River, the Bureau's releases of water from Folsom Dam have fluctuated wildly often leaving the river below the dam high and dry. In other instances the temperature of the water has been too hot for salmon survival because of excessive draw downs of the reservoir. Not only has natural spawning in the river below the dam suffered, but so too have the operations of the mitigation hatchery. In recent years, stocks from other hatcheries have had to be used to make up for the lack of fish to Nimbus Hatchery, which was built to "mitigate" the impacts of Folsom Dam.

On the Trinity River, the Bureau plundered that river system—diverting as much as 86% of its flow—reducing releases from Lewiston Dam to 119,000 acre-feet, until then-Secretary of Interior Cecil Andrus, at the request of groups such as CalTrout, the Hoopa Valley Business Council and PCFFA, ordered "study flows" of 346,000 acre-feet for release. But, since the beginning of the current drought, the Bureau has sought to circumvent the Andrus order by declaring "dry" or "critical dry" years as a means of reducing flows for fish in the Trinity River. There was no reduction in deliveries of Trinity water, however, to the Bureau's contractors in the Central Valley.

Further, the Bureau has failed to provide adequate flows into the mainstem of the Klamath River from Klamath Lake in Oregon. While the increased flows into the Trinity have helped to bring back part of the king salmon run that had declined by 80%, the Bureau has sought and continues to seek ways around the Andrus flow order. The Department of Interior's current behavior with regard to Klamath and Trinity flows is but one reason why we need S. 484.

Although the Sacramento-San Joaquin River system produces 70% of the salmon harvested by commercial trollers and recreational anglers offshore California, the Klamath-Trinity system is also very important to us. While it produces only 10% of the salmon harvested offshore Oregon and California, the Pacific Fishery Management Council's ocean fishery regulations for northern California and southern Oregon are predicated on the health of Klamath-Trinity stocks and their allocation.

The Klamath-Trinity has become the tail wagging the dog of ocean salmon regulations.

The Klamath-Trinity system also supports a tribal fishery for the Hupa, Yurok and Karok peoples, as Steve Suagee will testify to. But, the Department of Interior, which has a trust responsibility to these tribes, has consistently breached that responsibility by failing to provide adequate flows from its Trinity CVP operations, as well as its Oregon Klamath Lake operations, for the fishery resources of the Klamath and Trinity rivers.

Indeed, the only time Interior becomes emphatic about its trust responsibilities to the tribes of this river system is when the opportunity presents itself, such as this year, to close down the ocean fishery to salmon trollers (who have consistently been Interior's most vocal critics). The Department of Interior's behavior in regard to California's salmon fishery, and specifically the runs of the Klamath-Trinity system, has been both hypocritical and cynical. Interior ignores its tribal trust responsibilities when it comes to providing adequate water for the fish in the river and then argues "trust responsibility" for the maximum allocation of what salmon remain for the tribes, at the expense of other salmon fishermen. It is an insidious, and mostly successful effort, to pit salmon users against one another—preventing fishery alliances that might successfully challenge the Department's practices of drying up streams to deliver cheap water to Central Valley agribusiness customers.

The CVP destruction of the salmon fishery does not end with its dams and diversions in our rivers. It extends as well to the pumps it operates in the San Francisco Bay-Delta estuary. The pumps operated by the CVP and its little brother—the State Water Project, have caused untold damage to outmigrating salmon. In fact, in an effort to save fish from the pumps, California Fish & Game has attempted to truck most of its hatchery production in the Sacramento-San Joaquin system around the pumps for release at sites in the upper bay. This "bussing of fish" may work for some hatchery stocks, but it is difficult to do with natural spawning runs and does lead to increased straying. It is a helluva way to run a fishery.

Before leaving the pumps issue, let me just give you one example of the amount of harm we are talking about. Keep in mind also that the San Joaquin River often runs the other way due to pumping and that in the past four years of drought, for at least 300 days in each of those years, more water went into the federal and state Delta pumps than flowed into San Francisco Bay. A smaller set of pumps is operated on the Sacramento River by the Glenn-Colusa Irrigation District. According to Fish & Game figures, this one irrigation district alone kills 2,500 winter-run adult spawning equivalents alone. That is more than five times the present spawning run of the winter-run population. Imagine the damage being done to the much larger fall-run populations. Imagine the damage being done at the much larger CVP pumping operations in the Delta.

Nowhere has the destruction caused the salmon fishery by CVP operations been more evident than during this past four years of drought. Commercial salmon landings dropped from 14 million pounds in 1988, the last of the "wet year" class of fish, that also produced high spawning escapements back to the rivers, to 5 million pounds in 1989—the first of the "drought year" class of fish and even less in 1990. Last week I spent at the Pacific Fishery Management Council meeting in San Francisco where it was proposed that the north coast from Point Arena to southern Oregon be totally closed for the first time in history along with severe closures south of Point Arena. This is because of estimates of low stock abundance. This low abundance is a direct result of the excessive pumping by the Bureau and others during the four years of drought. I should point out that the good seasons of 1986, 1987 and 1988 were on stocks that were the progeny of low to moderate spawning escapements and high water flows. The 1989, 1990 and whatever is available in 1991 and 1992 are of stocks that were the progeny of high spawning escapements and low water conditions in-river.

While the water for the fish was being cut back at the beginning of the drought, there were no agricultural cutbacks in water even proposed until 1990. Cotton acreage actually increased during the drought. California agriculture, which receives much of its water from the CVP, enjoyed four years of record profits during the drought. The Bureau still plans to go ahead and ship water this year to its CVP agricultural customers even though the state has cut agricultural deliveries. Salmon trollers meanwhile are being told to tie-up their boats.

Senator Bradley, the history of CVP operations in California has been one of Interior kissing the hind quarters of its agribusiness contractors and kicking those of the fishermen.

You may ask, as so many in the Bureau have asked, as so many in the state Department of Water Resources have asked, as so many in the Legislature have asked, "why save the salmon?" "Isn't it a question of food versus fish, or people versus fish?" "Obviously the people have to be given priority for the water; obviously food and agriculture have to be given priority over fish." Obviously, somebody is wrong.

Senator, I know you know, but let me repeat for others testifying here today, for others in the audience, and for the record—fish are food. The wild stocks of salmon produced in our rivers and harvested off our shores are a high value food product, unlike alfalfa or irrigated pastureland. These salmon contain no antibiotics, growth hormones or coloring agents. Our king salmon are naturally rich in Omega-3 fatty acids which health experts have found to help reduce the incidence of heart disease and the formation of certain forms of tumors.

Not only are our troll-caught wild king salmon good for you, they are good tasting. They are regarded by chefs worldwide as the finest of the salmon. Grilled and poached king salmon are found in the best restaurants in Los Angeles as are the lox in the best delicatessens. Barbecued king salmon are enjoyed in the home over outdoor grills in the summer. The Governor of California does not have to go to Japan to twist arms to get them to buy this commodity, the Japanese come here seeking our salmon.

Last week, one buyer alone in Moss Landing received an order from Japan for a million pounds of king salmon this season. This is an order that he sadly will not be able to fill largely because of the impacts the Bureau's CVP operations have had on our salmon stocks the past four years. Given the seasons being proposed by the Pacific Fishery Management Council for this year, the total state harvest may not be much more than the amount of this one order to a single buyer.

Best of all, our wild king salmon, unlike cotton and rice, do not require subsidized cheap water to be grown on and they do not require federal price supports to get to market. Unlike Norwegian farmed salmon, California's wild king salmon get no government help.

As an industry, California's salmon trollers have done everything humanly possible to protect and restore salmon populations. We have put our money where our mouth is. I personally operated a small salmon rearing facility in Mendocino County for a number of years. PCFFA and many commercial fishing groups presently operate salmon rearing and salmon habitat restoration projects along the north and central coast. We have taxed ourselves both through our associations and through the state with a salmon stamp to help the fish. Our commercial salmon stamp program has raised millions to restore habitat, to increase hatchery production and assist natural spawning. We even funded the environmental documentation for the screens for the Glenn-Colusa Irrigation District. PCFFA helped draft and fund two successful bond act campaigns to provide monies for salmon restoration and fish habitat acquisition.

The State Legislature, too, has been helpful in providing millions more for salmon restoration. In fact, it is state policy to double our salmon populations by the year 2000. We have the will, we have the money, but we don't have the water. That is why S. 484, "The Central Valley Project Improvement Act" is so important to us. Because without a fundamental change in the method of operations, in the policies of the CVP, we will not be able to save our fishery.

Senator Bradley, band-aids will not work. Fundamental changes are needed in the CVP, which controls 20% of California's water, if this state's remaining fish and wildlife is to be protected, much less restored. Not only is its fish and wildlife at stake, so too are its municipalities such as Los Angeles which, like most urban areas of the state, is being asked to reduce water consumption by as much as 50% because of the mismanagement of our water resources in the past; because we have allowed water to be wasted to lands that should have never been irrigated for crops having little value other than their USDA subsidies.

PCFFA applauds efforts to encourage water conservation. The former chairman of the California Advisory Committee on Salmon & Steelhead Trout has suggested a $5.00 an acre-foot surcharge on all water deliveries from the state and federal projects to fund fish and wildlife programs and the installation of water conservation technologies for agricultural and municipalities. This will help, but not without CVP policy changes. After all, what then is to prevent the Bureau from selling the water saved to further increase agricultural acreage of subsidized crops?

Water transfers or water marketing may help in limited instances. Water marketing, like Marxism, is great in theory but we are skeptical about how well it will work. For example, will CVP water contractors, purchasing water for as little as $2.00 an acre-foot, be allowed to profit at taxpayer expense by turning around and selling that contracted water for $300 or more an acre-foot? I think we've had enough socialism already with the CVP; the taxpayers can no longer afford the Central Valley agribusiness welfare mothers. Wide open water marketing also does not assure that legitimate small family farmers growing high value crops are protected or will have access to the water presently flowing to the subsidized crops of the large agribusiness corporations.

Further, without provisions, such as proposed in S. 484, to dedicate a specified amount of the water to be transferred for fish and wildlife purposes, salmon, striped bass and other fish will continue to be left high and dry in the streams.

There are those also arguing that we must "increase the pie", a euphemism for more dams. The only way to increase the freshwater pie in California is to install a massive number of desalinization plants along the coast and waste water treatment and recycling. More dams and storage simply reallocate fresh water by robbing it from the streams and estuaries to hold in storage for off-stream uses. They do not create more fresh water or "increase the pie". Increasing the water in the storage "pie" means that the fish and wildlife "pie" will be further diminished.

The one "pie" that we know can be increased, however, is the salmon resource simply by protecting and restoring habitat and leaving sufficient water in-stream for that high-value crop to spawn and grow.

In a sense the history of the CVP, as with much of California's water development, has been a reallocation of water from in-stream uses for out-of-stream purposes. This has not been without a cost. King salmon has been lost to king cotton. The economies of the north coast have fallen victim to the profiteering of the agribusiness giants of the San Joaquin Valley. The fish and wildlife, the salmon trollers and Indians, Los Angeles rate payers and U.S. taxpayers are paying for the Rolls Royces and Beverly Hills mansions of the cotton growers and desert land developers, and the CVP has been the conduit for the transfer of that wealth.

Given that water is a finite resource, we need to begin looking at ways of better and more fairly and environmentally allocating it. Fish and wildlife need some of the water back and municipalities need firm supplies of good quality water. As you know, 85% of California's developed water is used by agriculture. Roughly half of that goes to four crops—alfalfa, cotton, rice and irrigated pastureland—which account for only 15% of the value of the state's agriculture. Further, considering that these crops can only be grown by virtue of cheap subsidized water and some only get to market by federal subsidies, does it really make sense to continue destroying fish and wildlife, to sacrifice municipal water supplies for these types of out-of-stream uses? We think not.

Senator Bradley, we believe that your bill, S. 484, and its companion measure in the House by Representative George Miller, is the only answer to correcting the practices of CVP and key to water use reform in California. By making the protection of fish and wildlife a co-equal purpose of the CVP, we will assure that king salmon are given equal consideration with king cotton, that striped bass will be able to compete with alfalfa, that duck water is considered with rice water. Also, it will guarantee that fish and wildlife get some of the water they need back by assuring a fixed amount is allocated for such purposes in the headlong rush to market water.

While PCFFA fully supports your bill and its purposes, there are a few provisions of S. 484 that we believe need strengthening. They are as follows:

Section 4(c)(1). PCFFA believes that the 10% figure for dedication to fish and wildlife purposes should be specified as a minimum amount. For example, in the case of the Friant Unit contracts of the CVP, more water may be needed for fish and wildlife given the absolute destruction caused by this unit of the CVP operation.

Section 5(a). PCFFA wholly supports this provision, but again cautions that the 25% dedication of flow for fish and wildlife from the transfer should be stated as a minimum amount.

Section 6(f). A new section (f) should be added here requiring the Secretary of Commerce, in cooperation with the California Department of Fish & Game, to develop a plan for the restoration of the salmon fisheries under the jurisdiction of the Department of Commerce, pursuant to the Magnuson Fishery Conservation & Management Act, 16 USC 1801 et seq., that are or have been impacted by the operations of the Central Valley Project.

Section 7(d)(3)(A). Of the three persons appointed by the Governor, we suggest that at least one be from a private organization and knowledgeable of the fishery and fish conservation, and one from a private organization knowledgeable on waterfowl conservation. Perhaps the two appointments made by the Senators should be of persons possessing "superior credentials in the preservation and restoration of natural diversity". We suggest the changes to (d)(3)(A) essentially out of our concern that some of the appointees be from "the real world" and not simply bureaucrats and academics. I guess our concerns are not unlike those once voiced by Speaker Sam Rayburn regarding the "best and the brightest".

Section 10(h). We suggest that the existing subsection (h) be changed to an (h) and (i) with one appointment going to a representative of a commercial fishing organization and one to a recreational fishing organization. All of the serious commercial and recreational fishing groups are conservation organizations, although most of us don't talk about, or boast about it, we do it.

California's salmon fishery and salmon fishermen cannot wait another year for CVP reform. Salmon fishermen are looking at options of total closures on their fisheries this year. Some of the fish runs, such as the winter-run will become extinct if something is not done about CVP operations. Salmon fishermen for the first time ever have been forced to seek "drought relief" because of what has happened during the drought by the Bureau. As you may be aware there are not programs that fishermen can readily avail themselves of as there are for agriculture. We are struggling trying to survive this year, because of what the CVP, and its baby brother the SWP, has done to us and the fish.

Senator Bradley, we need CVP reform now. Your bill and Mr. Miller's bill are the answer, not some band-aid with a little bit of conservation and a whole lot of dams. Cities, such as Los Angeles, needing firm water supplies cannot wait. The coastal communities, their shoreside workers and businesses cannot wait. The tribes cannot wait. The salmon trollers cannot wait. The fish cannot wait.

Thank you for the opportunity to testify. I would be happy to answer any question you or members of the Subcommittee may have.

Senator BRADLEY. Thank you very much, Mr. Bingham, for your testimony.

Mr. Stephen Suagee.

STATEMENT OF STEPHEN H. SUAGEE, ATTORNEY, HOOPA VALLEY TRIBE

Mr. SUAGEE. Thank you very much, Senator Bradley.

My name is Steve Suagee, I am one of the Tribal Attorneys for the Hoopa Valley Indian Tribe. There are three of us these days. I live and work on the Hoopa Reservation, the Tribal government is my only client. I have been there now for about 4½ years, and for the vast bulk of my time there I have devoted my practice to the various issues pertaining to the tribe's rights in the Trinity River.

The Hoopa Reservation is roughly a 12-mile square encompassing roughly 90,000 acres. It straddles the lower 14 miles of the Trinity. The northern boundary of the reservation is the point of confluence of the Trinity with the Klamath River.

The Hoopa Tribe has been in the lower Trinity and the adjacent mountainous areas for the last 10,000 years. And I can insure you that the tribe has no intention of leaving for the next 10,000 years, which is why we are here today.

We need some more water for our river. For the past 28 years the Trinity River has suffered from extreme drought conditions imposed not by nature, but by the Central Valley Project.

A couple of words about the tribe before we get into our concerns about the Central Valley Project.

As a result of some amendments to the 1988 Indian Self-Determination Act, the Hoopa Tribe is one of a small handful of tribes nationwide that has a self-governance compact with the Secretary of the Interior. The intent is to streamline the relationship between the Tribal government and the central office of BIA in the hopes that more money will come directly to the reservation for tribal programs managed by the tribe.

I think one of the major tests of this self-governance program is going to be whether the department can fulfill its trust obligations with respect to major natural resources, such as the kind we have been experiencing with the Central Valley Project all these years.

The tribe has historically relied on the abundant timber resources of the northern coastal mountains to make its living, and of course as you have alluded in your introductory remarks, the timber supply is dwindling, there are concerns about endangered species in the forest. This is something that the tribe struggles with everyday, that difficult struggle to balance the interest between economic development and environmental protection.

We are desperately concerned that we are headed in the same direction with the fisheries in the Trinity River System. Because for the last 28 years, as I said, the Trinity has been deprived of 80 to 90 percent of its annual flow as a result of the exports by the Central Valley Project's Trinity River Division to the Sacramento Basin.

The reason this concerns of, of course, is that Hoopa is an aboriginal fishing tribe. They have fished there for the 10,000 years that they have been there for ceremonial purposes, basic subsistence. Fish has always been a form of abstract commercial exchange as well, and in the modern world we are struggling to develop a commercial fishery that will take some of the pressure off of our dwindling timber base.

We have Federal reserved fishing rights that were established when the reservation was created in 1864, and I think it is beyond question, in fact, the Secretary of the Interior recognized in 1981 that the tribe is entitled to Federal reserved mainstream water rights to the extent that stream flows in the Trinity are necessary to support fish populations in the river roughly equivalent to those that prevailed before the Central Valley Project unit was established on the Trinity River Division.

What we have seen though for the entire time that the Trinity River Division has been there is absolute preferential treatment for the Central Valley Project.

As I mentioned, we had flows in the range of 10 to 15 percent of the normal stream flow at the diversion point at Lewiston Dam about 70 miles upstream from the reservation. Not surprisingly, 90 percent of the fall chinook runs in certain years were destroyed. And there have been some attempts during the 1980's to rectify this problem. Certainly a lot of fine words and a lot of fine policies put in place and promises made. But, as I am here today I have to report, as we have stated in our written testimony, that the salmon returns to the Trinity River this past fall in 1990 were missed by just a few fish being the worst run ever.

The Fish and Wildlife Services stated that the fishery is in severe decline, it is no better than it was in the late 1970's when the department and Congress first began addressing Trinity Fishery in a serious way. We have language in a committee report from the House Interior Committee that was just filed on Friday, that has reviewed the record that has been developed by the tribe and the Fish and Wildlife Service in the last several years. And they concur with our position and with that of the Fish and Wildlife Service, that the stream flows in the Trinity River must be increased right away in order to prevent the complete destruction of the Trinity Fishery. And for that reason we will want to continue to talk with your staff about the prospects for establishing minimum stream flows for the Trinity River in this legislation.

I think that it would be appropriate for a bill like this. The Trinity Basin is unique among Central Valley Project Basin's of origin. It is the only basin that is completely outside the Central Valley Project Service Area, we receive absolutely no benefits from the project in return for the destruction of our fishery. You cannot even begin to play the zero sum game that they try to play in their other service areas.

The recently withdrawn draft Environmental Impact Statement, for instance, on the marketing of the supposedly uncommitted, supposedly firm yield that the CVP claims to have. The Trinity Basin was written right out of the statement simply by virtue of its not being within a CVP service area.

The Trinity and one of it's major tributaries, the Southfork, are in the wild and scenic river system. Much of the land in the Trinity Basin above the Hoopa Reservation is Forest Service land.

The Hoopa Tribe is in the process of developing its tribal primacy under the 1987 Amendments to the Clean Water Act. We are the first tribe in California to be so certified, and we believe we have a very good working relationship with the adjacent State Regional Water Quality Control Board, and they are looking forward to us being fully on board in the regulation of water quality in the Trinity River.

We have in the last several years developed an excellent partnership with the Trinity County government as we attempt to address basin-wide solutions to some of these difficult problems.

As Mr. Bingham just mentioned there is a valuable commercial fishery, there is a sport fishery, there is recreation and tourism. All of these kinds of interests are being daily sacrificed to the Central Valley Project.

So, I appreciate the opportunity to bring this to your attention. We do consider the matter extremely urgent, we need help this year, but, we certainly need help between now and 1996 when various studies that have been mandated both by the secretary and the Congress are due to conclude. And it is very clear to us that reclamation is doing all they can to undermine these things, and until we have stream flows set by Congress I think the CVP will continue to be the tail that wags the dog in the Trinity River Division.

[The prepared statement of Mr. Suagee follows, attachments are retained in subcommittee files:]

PREPARED STATEMENT OF STEPHEN H. SUAGEE, ATTORNEY, HOOPA VALLEY TRIBE

The Hoopa Valley Tribe appreciates this opportunity to submit testimony on the Central Valley Project Improvement Act. The Central Valley Project (CVP) certainly needs to be improved as regards the impacts of its operations on fish and wildlife resources; such improvements are especially needed for the CVP's Trinity River Division. The Tribe generally approves of the "federal interest" approach taken in this bill, and appreciates the specific provisions that recognize tribal interests in the Trinity River fishery (including but not limited to the mandate for a trust responsibility plan from the Secretary in Section 6(e) and a tribal appointment to the CVP transfer advisory committee in Section 10). However, because the CVP persists in taking far too much water from the Trinity River, the Tribe believes that it is necessary and appropriate in legislation such as this for Congress to establish minimum Trinity River streamflows through water year 1996.

THE HOOPA VALLEY TRIBE AND THE TRINITY RIVER

The Hoopa Valley Reservation is located along the lower fourteen (14) miles of the Trinity River in northern California's coastal mountains. For ten thousand years, Hoopa Indians have depended on the once abundant salmon and other fishery resources of the Trinity River for subsistence, commercial, and important cultural and religious purposes. Since 1963, streamflows in the Trinity River have been controlled by water releases from the Central Valley Project's Trinity River Division reservoir system. The Bureau of Reclamation's operation of the Trinity River Division has effectively imposed severe drought conditions on the Trinity River fishery for the past twenty-eight (28) years.

Reclamation typically exports 80% to 90% of the Trinity's annual flow to the Sacramento River basin for the CVP. Fish habitat loss resulting from depleted Trinity streamflows has reduced fish production by up to 90%; in 1990, spawner returns to the Trinity were about 15% of what the Fish and Wildlife Service has determined is the proper goal for restored Trinity fish production. The CVP's excessive exports of Trinity water are profoundly inconsistent with basic trust responsibilities to the Tribe's fishery resources, and make a mockery of the 1984 Congressional mandate to restore the naturally produced Trinity fishery to levels that existed prior to the Trinity River Division.

In addressing the Trinity River situation, it is important to bear in mind that the Trinity basin is hydrologically distinct from the Sacramento basin and all CVP service areas. Not only does the Trinity River receive no benefits from the CVP in return for the destruction of its fishery, it is generally ignored by the CVP in assessing the impacts of its activities. (The 1988-89 draft environmental impact statement on renewed marketing of "uncommitted" CVP yield, for instance, effectively defined the Trinity basin out of the affected environment to be analyzed simply because the basin is not within any CVP service area.)

On the other hand, there is a multitude of federal and local interests within the Trinity basin that will remain at significant risk until there is meaningful reform of Trinity streamflow policy: Of paramount concern to the Tribe, of course, is the trust responsibility to protect tribal fishery resources and instream water assets. In addition, the Trinity is a federal Wild and Scenic River, and much of the river above the Hoopa Reservation is within National Forest lands. Water quality issues relative to logging practices must be coordinated with streamflow policy reform. The Tribe is a partner in basin-wide water quality efforts by virtue of its jurisdictional primacy over on-reservation water quality pursuant to the 1987 amendments to the Clean Water Act. Ocean harvest of Trinity salmon stocks is regulated by the Commerce Department pursuant to the Magnuson Act. The local economy is heavily dependent on the commercial ocean fishery, on the in-river sport fishery, and on other recreational uses of the Trinity River. Adequate Trinity streamflows will provide the only meaningful support for these important interests, and will enable the entire North Coast region of California to maintain some level of resource and economic self-sufficiency in the years ahead.

IMPACTS OF THE TRINITY RIVER DIVISION

Congress authorized the construction and operation of the Trinity River Division in the Act of August 12, 1955, 69 Stat. 817, which included the condition that the Secretary "adopt appropriate measures to insure the preservation and propagation of fish and wildlife" in the Trinity River. As mentioned above, Reclamation's annual export of 80% to 90% the Trinity's annual flow has effectively imposed drought conditions on the Trinity fishery for the past twenty-eight years. As a result, fall and spring run chinook salmon, and other important species, have declined by as much as 90% from pre-Trinity River Division levels.

THE SECRETARY'S 1981 TRINITY FLOW DECISION

On January 14, 1981, the Secretary made a decision allocating 340,000 acre feet to an annual Trinity fishery streamflow. The decision also authorized substantial to severe streamflow reductions in low water years as determined annually by forecasted runoff to the CVP's Shasta Reservoir on the upper Sacramento River. Finally, the 1981 decision also mandated a 12 year Fish and Wildlife Flow Evaluation Study to determine the permanent habitat flow needs of the Trinity fishery. The decision contemplated that reductions in the 340,000 acre feet annual streamflow volume would occur not more than twice during the 12 year study. The 12 year FWS Trinity Flow Study is now due to conclude in 1996, and not once during this study's first six years has the Trinity received the necessary 340,000 acre feet fishery streamflow.

The Secretary's 1981 decision quoted at length from a memorandum of the Associate Solicitor, Indian Affairs, and expressly recognized his trust responsibility to provide streamflows sufficient to restore the natural Trinity fishery for the benefit of the Hoopa Valley and Yurok Tribes. The Hoopa Valley Reservation is located along the lower 14 miles of the Trinity River, and the Yurok Reservation is located along the lower Klamath River below its confluence with the Trinity. Each Tribe exercises federal reserved fishing rights within its respective reservation, and both tribal fisheries are dependent on fish production from the Trinity. Because the Hoopa fishery is exclusively in the Trinity River, it is clearly the more affected by the Trinity River Division.

The Secretary's 1981 Trinity flow decision was also based on an environmental impact statement (EIS) prepared in late 1980 by the Fish and Wildlife Service in cooperation with the Bureau of Indian Affairs and the Water and Power Resources Service (Reclamation's predecessor). In this EIS, the Fish and Wildlife Service clearly established that an annual instream release of 340,000 acre feet was necessary to restore the Trinity fishery.

THE TRINITY RESTORATION ACT AND PROGRAM

In 1984, Congress enacted the Trinity River Fish and Wildlife Restoration Act, Act of October 24, 1984, 98 Stat. 2721, Pub. L. 98-541, which required the Secretary to implement a management plan that would restore and maintain Trinity River fish populations "to a level approximating that which existed immediately before the start of the construction of the Trinity River division." A 1983 Fish and Wildlife Service EIS prepared for the Restoration Program contemplated by the 1984 Act established an annual spawning run of 71,000 salmon (including 62,000 naturally produced fish) as the appropriate goal for Trinity fishery restoration.

RECENT FWS FINDINGS

In September 1990, the FWS Trinity Flow Evaluation reported its interim findings, based on its first six years of study, to the Trinity River Task Force, a 14 member entity advisory committee established by the 1984 Trinity Restoration Act. (The Tribe is a member of this Task Force.) FWS now concludes that 340,000 acre feet must be regarded as the minimum streamflow necessary to restore the Trinity fishery, that such a flow is especially needed in drought years, and that substantially higher flows are necessary to achieve restoration of the Trinity fishery. FWS also noted that Reclamation has reduced streamflows in four out of the last six years, putting restoration efforts in jeopardy. Not once has the Trinity River received the full 340,000 acre feet mandated in the 1981 Secretarial Decision. The Trinity River Task Force unanimously endorsed these FWS findings in a letter to the Secretary dated September 10, 1990 and signed by Reclamation's Mid-Pacific Regional Director in his capacity as Task Force Chairman. A copy of this letter is attached hereto.

In December 1990, the California Department of Fish and Game released data showing that salmon spawning escapement to the Trinity for 1990 was the second lowest on record. Barely more than 10,000 salmon escaped to the Trinity in 1990, roughly 60,000 fish below the 1983 Restoration Program goals. A March 5, 1991 FWS memo warns of severe fishery impacts in this drought year if less than 340,000 acre feet is released into the Trinity, and noted that this fishery "has been declining steadily over the past few years and . . . has not improved substantially since the late 1970s."

In January, 1991, the FWS Trinity Flow Evaluation Study team forwarded a draft environmental assessment (EA) to its central office in Washington. This EA is tiered into the 1980 EIS that was the basis of the Secretary's 1981 Decision, and is a comprehensive statement of FWS's conclusions both that 340,000 acre feet must be regarded as the absolute minimum Trinity streamflow and that flows in the range from 400,000 to 578,000 acre feet are necessary to restore the fishery as Congress intended.

Even more recently, a February 13, 1991 letter to the Secretary from the Klamath River Basin Fisheries Task Force, another fishery restoration advisory committee established by Congress in Pub. L. 99-552, concurred with the September recommendations of the Trinity River Task Force, and urged the Secretary to provide a fishery flow of 340,000 acre feet during this drought year. A copy of this letter is also attached hereto.

The Hoopa Valley Tribe has filed an administrative appeal with the Secretary, contending that Reclamation has failed to fulfill its trust responsibilities to restore and protect the Trinity fishery and that the CVP has unlawfully received preferential treatment in the allocation of Trinity River water.

ONGOING CVP RESISTANCE

Despite the abundant unrefuted evidence from Interior's expert fishery agency, the Fish and Wildlife Service, the Central Valley Project continues to resist meaningful streamflow policy reform. The primary reason for this continued resistance appears to be the CVP's desire to deliver as much subsidized water as possible to irrigated agriculture. Reclamation claims that the Secretary lacks any discretion to alter the water deliveries as set forth in its various water user contracts, but has yet to produce any competent legal analysis to support this position. The Tribe's review of some of these contracts indicates that the Secretary has ample discretion to reduce virtually any delivery of contract water (including water under so-called "water rights" contracts) if necessary to meet a paramount federal obligation such as fulfillment of federal trust duties to Indian tribes or protection of endangered species.

Indeed, Reclamation has attempted to set up a conflict between the Trinity fishery and the threatened winter run chinook salmon in the upper Sacramento River. Reclamation claims it must export large blocks of Trinity water during June, July, and August each year, in order to provide cooler water to the Sacramento during a critical life stage of the winter run chinook. This is false. Every fishery agency with which the Tribe has discussed this issue concurs that summertime exports of Trinity water in fact cause the Sacramento River to get warmer; this is because Trinity water warms by about ten degrees F. on its trip to the Sacramento via the CVP's export system. In 1990, Reclamation released so much of this warmed Trinity water into the Sacramento that it actually had to release cold water out of the bottom of Shasta Reservoir, thereby partially bypassing power production, in order to cool the Sacramento back down. The winter run chinook has simply become an environmental pretext for the kind of high volume summertime exports of Trinity water that Reclamation has always engaged in on behalf of its irrigation constituents. It is improper to pit the trust responsibility on the Trinity River against Endangered Species Act considerations on the Sacramento. And indeed, reduction of summertime Trinity exports will benefit the fisheries of both rivers.

The CVP also exports Trinity water for power production at the three generating stations it passes through on its way to the Sacramento. Peak power exports also coincide with the peak summertime irrigation exports. The CVP makes power with Trinity water during the summer in order to hold back releases from Shasta Reservoir. Water released from Shasta for power production must come from a mid-level outlet, and during the summer the middle stratum at Shasta is claimed to be too warm for the winter run in the Sacramento River. But as discussed above, Reclamation's fix for this problem—that is, excessive Trinity exports—is ineffective because Trinity water gets just as warm as the middle stratum at Shasta.

Part of the solution to the operational problems discussed above would be the construction of a temperature curtain or similar device at Shasta. Such a device would enable the CVP to make power and provide irrigation deliveries with colder water from Shasta, and go a long way to eliminating the CVP's perceived need to continue in its Trinity export pretext. The Tribe emphasizes, however, that protection of the Trinity fishery must not be made contingent upon eventual installation of a temperature curtain at Shasta.

CONCLUSION

Given the above history of CVP abuse of its Trinity River water supply, the Hoopa Valley Tribe believes it is necessary and appropriate for the Central Valley Project Improvement Act to incorporate language setting minimum Trinity streamflows (of not less than 340,000 acre feet) for water years 1992 through 1996. Such flows will reasonably protect Trinity fish habitat and production while the FWS finishes its study that should form the basis for long term flow requirements and operating criteria consistent with Congressional restoration goals and the trust responsibility to the Tribe.

The Tribe would be pleased to furnish its proposed language to Committee staff during the week of March 18. We have or will provide copies of all documents and evidence relied on in this testimony. Once again we thank you for the opportunity to testify on an issue of critical importance to the future of the Hoopa Valley Tribe.

Senator **BRADLEY**. Thank you very much, Mr. Suagee, for your testimony.

Mr. John Winther.

STATEMENT OF JOHN L. WINTHER, PRESIDENT, DELTA WETLANDS

Mr. **Winther**. Thank you, Mr. Chairman, for inviting me to testify on the subject of S. 484.

Because of time constraints I will simply highlight my thoughts. I will be happy to answer questions following my statement and provide you with greater detail at your request.

The thrust of the bill, which recognizes the need for additional water for wetland and in-stream uses, is welcome recognition that these two valuable habitats, which have been lost as a result of water development and land reclamation, can be put on the road to recovery.

The concept of funding the restoration with water saved through conservation and funds gained through water transfers is basically sound, but in my opinion puts an excessive squeeze on the farming community.

The CVP with its present water supply will be unable to supply even half of the water demands which will be placed upon it in the near future.

At a recreational use of the beneficial uses in Lake Shasta further squeezes supply, but is a long overdue recognition.

The Fish and Wildlife situation and demand on water supplies are both at an emergency stage in California. I suggest the bill include language to seek new water supplies at the earliest possible date to begin to satisfy the programs needs.

This would be an act of good faith and demonstrate to farmers that this bill is not intended to simply separate the water from the farm.

Let us not forget there was the farmers and the communities that serve the farmers that brought us to the dance in this State. Let us not ride home with the drummer.

Farmers through their water contractors are making excellent progress on many of the environmental issues that will be addressed by this bill. Many good ideas have been put forth and good will developed, all of which will serve as excellent foundation for fulfilling the goals of this bill.

Please encourage these worthy programs to continue. This legislation recognizes the need to allow market forces to play a more prominent role in the allocation of our water resource. The relatively low cost of water to the farmer and the high increment of utility value recognized by the transfer to municipal and industrial uses are the engine that will drive this marketing mechanism.

A portion of that increment is shared with the environment. I suggest that a portion of the proceeds also be shared with local communities in order to soften third party impacts.

Language in the legislation limits construction of new projects for the sale of water until after the State Water Resources Control Board has completed the Bay Delta hearings.

I am concerned that the process may never technically be ended, and as a result could impose an undue burden on the farming community.

I cannot offer substitute language, what I suggest is to be along the lines of providing some measure of environmental enhancement prior to the execution of new contracts.

Earlier in my testimony I suggest that the fish and wildlife restoration projects be commenced in a high priority basis. Our company is developing environmentally sensitive water project, which could begin deliveries of water as early as 1992 in quantities that could meaningfully address the needs of fish and wildlife in our Central Valley.

In fact, our project is so far along in the permitting process that it may be ready to deliver water before the end of the 2-year planning period outlined in this legislation.

An early commitment to our project would allow us to be on-line with our full yield as the rest of the plan is ready unfold. I have provided your staff with the details of our project and would be happy to meet them at their convenience to further outline our program.

Thanks for your consideration.

[The prepared statement of Mr. Winther follows:]

PREPARED STATEMENT OF JOHN L. WINTHER, PRESIDENT, DELTA WETLANDS

Thank you, Senator Bradley and members of the committee for inviting me to testify on the subject of S. 484. Because of time constraints, I will simply highlight my thoughts. I will be happy to answer questions following my statement and provide you with greater detail at your request.

The thrust of the bill, which recognizes the need for additional water for wetland and in-stream uses, is welcome recognition that these two valuable habitats, which have been lost as a result of water development and land reclamation, can be put on the road to recovery. The concept of funding the restoration with water saved through conservation and funds gained through water transfers is basically sound, but, in my opinion, puts an excessive squeeze on the farming community.

The CVP, with its present water supply, will be unable to supply even half of the water demands which will be placed upon it in the near future. Adding recreational use to the beneficial uses in Lake Shasta further squeezes supply, but is a long overdue recognition.

The fish and wildlife situation and the demand on water supplies are both at the emergency stage in California. I suggest that the bill include language to seek new water supplies at the earliest possible date to begin to satisfy the program's needs. This would be an act of good faith and demonstrate to the farmers that this bill is not intended to simply separate the water from the farm. Let's not forget that it was the farmers and the communities that serve the farmers that brought us to the dance in this state. Let's not ride home with the drummer.

Farmers, through their water contractors, are making excellent progress on many of the environmental issues that will be addressed by this bill. Many good ideas have been put forth and goodwill developed, all of which will serve as an excellent foundation for fulfilling the goals of this bill. Please encourage these worthy programs to continue.

This legislation recognizes the need to allow market forces to play a more prominent role in the allocation of our water resource. The relatively low cost of water to the farmer and the high increment of utility value recognized by a transfer to municipal and industrial uses are the engine that will drive this marketing mechanism. A portion of that increment is shared with the environment. I suggest that a portion of the proceeds also be shared with the local communities in order to soften third party impacts.

Language in the legislation limits construction of new projects for the sale of water until after the State Water Resources Control Board has completed the Bay-Delta hearings. I am concerned that the process may never be technically completed and, as a result, could impose an undue burden on the farming community. I cannot offer substitute language, but I suggest that it could be along the lines of providing some measure of environmental enhancement prior to the execution of new contracts.

Earlier in my testimony I suggested that fish and wildlife restoration projects be commenced on a high-priority basis. Our company is developing an environmentally sensitive water project which could begin deliveries of water as early as 1992 in quantities that could meaningfully address the needs of fish and wildlife in our central valley. In fact, our project is so far along in the permitting process that it may be ready to deliver water before the end of the two-year planning period outlined in this legislation. An early commitment to our project would allow us to be on-line with our full yield as the rest of the plan is ready to unfold. I have provided your staff with some details of our project and would be happy to meet with them at their convenience to further outline our program.

Thank you for considering these comments.

Senator BRADLEY. Thank you very much, Mr. Winther, for your testimony.

Now we will go to Mr. Harrison Dunning.

STATEMENT OF HARRISON C. DUNNING, CHAIRMAN, THE BAY INSTITUTE OF SAN FRANCISCO

Mr. DUNNING. I am very pleased to be here, I appreciate the invitation for us to participate.

I am Chairman of the Bay Institute of San Francisco. We are a relatively new participant in many of these discussions. We were formed in 1981 specifically to get ready for the Bay Delta hearings that you have been hearing about all day. They have been very difficult and really quite unsatisfactory hearings from many points of view. But, the process is not over and we are hopeful that once EPA has had a chance to review this and perhaps the courts we will have a good outcome from those hearings.

We very strongly support S. 484 because if you are concerned with San Francisco Bay as we are you are concerned with an estuary at the end of a very long system of waterways. And any scientist will tell you, any scientist knowledgeable about estuaries will tell you that the critical function is fresh water in flow. Cut off the fresh water the estuary dies.

We have an estuary, the largest on the west coast of North America, a very productive estuary, one that is very threatened at the present time. It has lost already over half the in flow and really cannot afford another acre foot. We may need to restore flow in order to restore the full productivity of that estuary.

Being concerned with in flow we are concerned with water projects. Being concerned with water projects we are concerned with the CVP, which of course is the dominant diverter out of the Delta sending water to the south.

Now, when we look at your legislation we find first of all that it does put an end to this argument about just what the authority of the CVP is. There are various views on that. We understand that maybe some units already are authorized to be operated for the beneficial of fish and wildlife. But, there seems to be remaining uncertainty and ambiguity about the overall authority to operate the full CVP in order to enhance and restore fish and wildlife resources.

Rather than leave that to the courts and a long projected process we think it is much better as your legislation does, to settle the matter once and for all and provide that authority, if it is not there already, to the Bureau of Reclamation.

Now, authority alone does not do much if there is no water. If they have the authority to operate for fish and wildlife, but the water is all committed for agriculture and M&I then it is not going to be very helpful in practice. So, we really would like to compliment you on the imaginative way in which the bill, and a fair I think, in which this bill seeks to free up overtime a significant quantity and an appropriate quantity of water to be used for these fish and wildlife restoration purposes.

We think the combination of funding and water, water that is derived from transfers, water that is derived at the time of renewal of contracts, all of that as a package over time could make a very significant difference for the estuary for the entire water system.

We note that you direct the Bureau of Reclamation to develop programs to comply with State law, particularly the Fish and Game Code Provision, which is very, very important in California, 5937. There is a tendency on the part of the bureau to defer to State law when it suits the needs of the traditional constituencies.

When the farmers like it and it works out well in terms of diversion of water for consumptive use, then the bureau and the Federal attorneys representing the bureau seem quite willing to follow the mandate of section 8 in the Reclamation Act and defer to State law.

But, when it is a matter of deferring to State law that has to do with environmental protection there seems to be reluctance and quibbling and questions. And we very much applaud the language in your bill which makes it very explicit. That not only are they to comply, but they are to develop a program, aggressively seek out ways to meet 5937, the provide flows, to keep downstream fish in good condition.

Although we are extremely enthusiastic about this bill and intend to work as hard as we can in publicizing it, we do have some concerns, and I would like to briefly highlight those for you. They are developed in more detail in my statement, which I have submitted.

One concern relates to this 100,000 acre foot set aside for M&I. I think we understand the political logic of that. The notion of opening up the project and having the benefits be available to a wider community within California then has been the case in the past.

But, at the same time we feel that we must point out that from the estuaries point of view loss of in flow is loss of in flow. If the acre of feet go out of our natural system for M&I purposes it is really just as devastating as if the acre feet go out for agriculture. If you converted the entire CVP to an M&I project to service cities up and down the Central Valley and in Southern California, for example, and you increased the yield, and allowed the bureau to go ahead and contract for that, that would be bad from our point of view for the estuaries. So, we would certainly urge great caution with regard to that set aside provision.

Secondly we would like to emphasize that the estuary is simply one part of a magnificent ecological system. The whole thing needs to be viewed in a holistic way. We have the Sacramento River, the San Joaquin River, the Delta, Sassoon Marsh, particularly important component in the system, and the bay.

I think by in large your bill does view the matter in a systematic way, but there are points. For example, when you mandate the preparation of a programmatic environmental impact statement, with regard to renewal of the contracts the language is limited somewhat. It is limited to three river basins, it does not specifically reference the estuary, and yet the renewal of the contracts and exercise of new contracts certainly is going to impact very heavily on the estuary as we have seen in the past contract.

So, that is the second point that we would urge, that you broaden the references throughout the bill wherever necessary to include the estuary on a equal basis with other parts of this ecological system.

Finally we would like to support what the State Lands Commission had to say this morning about the Public Trust Doctrine. They are involved in lots of applications of the Public Trust Doctrine, but for purposes of the Bureau of Reclamation it is really the *Audubon* decision in 1983, which is very, very important in California. That was the unanimous decision from the California Supreme Court, a very fully developed and thoughtful opinion in which Justice Broussard reviewed what you might call traditional California water rights law, reviewed the doctrine, pointed out how they both serve the public purposes and public needs, pointed the way to integrating these two things into a single water allocation system for the State of California.

The legislature has done nothing to change that. The lower courts have been implementing that. We have Judge Racanelli's decision that was mentioned this morning, and it relies very heavily on the Public Trust Doctrine and supporting the authority of the State Water Resources Control Board. We have a recent trial court decision dealing with the lower American River, which relies heavily on the Public Trust Doctrine. It has become a very important part of contemporary California Water Rights Law. Now we think it does apply to the Federal Government through section 8 of the Reclamation Act, but there are possibilities for quibbling and arguing and litigating and dragging it out.

We would suggest that in mandating the bureau to develop a program to comply fully with 5937 of the Fish and Game Code you add to that another directive that the bureau also develop a program to comply fully with the California Public Trust Doctrine.

I would point out that 5937 is limited to fish. The Public Trust Doctrine is not so limited, it covers wildlife as well. And I think it is very consistent with the historical decision in Congress to defer on these water right questions regarding Federal projects to the State law. It is very consistent with that long tradition to say that the Bureau of Reclamation ought to defer to what we have now as an extremely important element in our contemporary water right law.

Thank you very much.

[The prepared statement of Mr. Dunning follows:]

PREPARED STATEMENT OF HARRISON C. DUNNING, CHAIRMAN, BAY INSTITUTE OF SAN FRANCISCO

Mr. Chairman, members of the subcommittee, I am Harrison C. Dunning. I am a Professor of Law at the University of California at Davis, where I have been dealing with water law as a teacher and researcher for over twenty years. In 1977-78, at the time of an earlier drought in California, I took leave from the university to serve as Staff Director of the Governor's Commission to Review California Water Rights Law. In 1982-83, I served as a member of the California Water Commission. Currently I am Chairman of the Bay Institute of San Francisco, on whose behalf I appear today.

The Bay Institute of San Francisco is a non-profit public service organization established in 1981 to prepare for the Bay-Delta proceedings of the California State Water Resources Control Board. These proceedings, which have been extraordinarily protracted and difficult ones, are designed to produce revised water quality plans for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and to condition the water rights of upstream diverters in order to implement the water quality standards in the plans.

The Bay Institute's interest in those proceedings is in the environmental health of San Francisco Bay and, by extension, the environmental health of the extensive upstream water system which supports the Bay. Currently the Bay Institute has about 3,000 members. We work closely with several other organizations involved in the effort to protect and enhance San Francisco Bay, the largest estuary on the west coast of North America.

S. 484, the Central Valley Project Improvement Act, is a bold and long-overdue measure to seek to undo some of the massive environmental damage which has been caused over the years by the federal Central Valley Project (CVP). The CVP has had a devastating impact on California's fish and wildlife resources, particularly those associated with the Sacramento River, the San Joaquin River, the Trinity River, Suisun Marsh and San Francisco Bay. S. 484 can help remedy some of that devastation.

Two principles in S. 484 are crucial. First, the measure would settle the long debate over the extent to which the CVP as a whole is authorized and directed to be operated for the protection, restoration and enhancement of fish, wildlife and related resources by mandating such operation. Second, consistently with that environmental mandate, S. 484 provides means for devoting an appropriate portion of CVP yield to the satisfaction of pressing environmental needs. The principal means are a partial bar to contracting for the sale of any presently uncontracted CVP yield, pending completion of a series of environmentally beneficial acts; limitations on the renewal of contracts for presently contracted CVP yield to one year, absent dedication of a small portion of the water to fish and wildlife purposes; and encouragement of CVP water transfers or "water marketing," on the condition a portion of the marketed water be devoted to fish and wildlife restoration.

Over the years the taxpayers of this country have poured many billions of dollars into the CVP, most of it for the benefit of Central Valley farmers, who have repaid only a small fraction of the amounts expended. The time to share the benefits of this federal largesse more widely is long overdue. We strongly support the goal of reforming and improving the CVP so that a suitable portion of the project's enormous yield goes for fish and wildlife restoration. With 95% of the riparian habitat of the Central Valley and the Estuary already destroyed, with waterfowl populations in those areas in continuing jeopardy, and with numerous particular species threatened or endangered, there is no time to wait or to waffle. These reforms are imperative, and they need to be enacted immediately.

We do have three concerns regarding S. 484. First, it provides an exception to the contract bar for up to 100,000 acre-feet of water for municipal and industrial purposes. We understand that the proceeds of such sales, minus ordinary operation and maintenance costs, would be directed to the CVP Restoration Fund established by the legislation. Nonetheless, each additional acre-foot contracted for, from whatever uncontracted CVP yield may in fact exist, is an acre-foot diverted from an already highly stressed river and estuary system, whether the diversion goes to agricultural use or to municipal and industrial use. Freshwater inflow is absolutely critical to the biological productivity of an estuary. San Francisco Bay has already lost well over half its freshwater inflow due to upstream diversions—it can ill afford to lose more. We urge great caution regarding new contracting for CVP yield. The legitimate needs of the cities can be better served by reallocations of existing CVP yield in a manner which compensates farmers, where appropriate, and provides net benefits to the environment.

Our second concern derives from the fact that the waterways of the Central Valley, the Delta, Suisun Marsh and San Francisco Bay are all part of a single magnificent ecological system. S. 484 recognizes the importance of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, for example by barring contracting for any uncontracted CVP yield until revised water quality standards have been established for the Estuary by state government and approved by federal government. But at some points in the bill, the Estuary is ignored. In Section 4(d), for example, a programmatic environmental impact statement analyzing the cumulative impacts of the potential renewal of all existing CVP water contracts is mandated, to include impacts "within the Sacramento, San Joaquin, and Trinity river basins." We suggest that the references be broadened to include impacts on the San Francisco Bay/Sacramento-San Joaquin Delta Estuary as well.

Third, as you may be aware, one of the most important recent developments in California water rights law involves the public trust doctrine. The public trust doctrine provides that the sovereign navigable waters of a state, together with the underlying land, are held subject to a fiduciary obligation to the public. Historically, navigable commerce and fishing have been the public values given central protection by the public trust doctrine, but over the past twenty years the courts in California have been explicit that environmental preservation is a public trust value of equal significance. In 1983, in the famous Mono Lake lawsuit brought by the National Audubon Society and others, the Supreme Court of California held that the water rights of the City of Los Angeles on several creeks which, in a state of nature, would flow into Mono Lake are subject to limitation to protect public trust values. Subsequent state court decisions have utilized the public trust doctrine to provide for environmental protection in the Sacramento-San Joaquin Delta and on the lower American River.

In the absence of any preemptive federal legislation and in light of Section 8 of the Reclamation Act of 1902, as interpreted by the U.S. Supreme Court in 1978 in a decision on the New Melones Dam, we believe the water rights held by the Bureau of Reclamation for operation of the CVP clearly are subject to California's public trust doctrine. We note that in Section 6(c)(2) of S. 484, the Secretary of the Interior is directed to develop, adopt, and implement a program to comply with the purposes and provisions of section 5937 of the California Fish and Game Code. We applaud that provision, but we suggest that Section 6(c)(2) be modified to direct that the compliance program include the California public trust doctrine as well. This is of particular importance since section 5937 is limited to fish, whereas the public trust doctrine includes wildlife as well as fish resources.

I want to conclude by emphasizing the dynamic quality of water law and water policy in California, as elsewhere in the West. For nearly 150 years we have been adapting and reforming our system of water rights to conform to new social values and priorities. At the time of the Gold Rush, we developed a "prior appropriation" system of water rights entirely different in principle from the riparianism of the East and the Middle West. Later, unlike many of the states in the West, we in California decided to recognize riparian water rights as well as appropriative water rights, but we integrated the two different systems to preserve seniority. "First-in-time, first-in-right" was the guiding principle in this seniority system, with "first" referring either to the use of water or to the acquisition of a patent to riparian land.

The seniority system may have been the best choice for nineteenth century California, when rapid economic development was a primary goal. But in this century, we have witnessed the gradual collapse of the seniority system. In 1928, for example, we amended the California Constitution to provide that water users, even those with very senior water rights, may not waste water. The consequences of that constitutional change can be observed today in the Imperial Valley, where the Imperial Irrigation District has been ordered by the State Water Resources Control Board to undertake a comprehensive program to reduce the waste of water. It is only a matter of time before similar programs are mandated for the Central Valley.

There are many other indications that we are in the process of abandoning the seniority system of the last century for a new system of equitable allocation of water. The courts have approved giving senior but unexercised riparian rights a very low status when we have a comprehensive stream adjudication. They have indicated as well that those with very senior rights on Central Valley streams may have to join the CVP and the State Water Project, who are relative newcomers, in meeting Delta water quality standards. Just last week U.S. Secretary of the Interior Manuel Lujan objected to the disparities created by a system of CVP allocations based on seniority which gives 75% of normal allocations to some CVP contractors during this time of drought, while other CVP contractors will receive only 25%. He reportedly termed those who had senior rights before the CVP was created a "privileged class" and asked Department of the Interior lawyers to study the department's authority to utilize a more equitable system of water allocation.

The social values of the 1990's are very different from those of the 1940's. We no longer would dream of simply writing off salmon runs of up to 300,000 fish annually, as we did when the CVP's Friant Dam was put into operation. Environmental protection and enhancement are now highly valued by the public, and our major water projects must be reformed accordingly. The CVP should not be immune from such change. We believe the time is right for enactment of S. 484, and we very strongly support the efforts of Senator Bradley and Senator Cranston in pursuing this legislation.

Senator BRADLEY. Thank you, Mr. Dunning, very much for your comments. They were very helpful.

Mr. Paulk.

STATEMENT OF JAMES PAULK, DIRECTOR, SOUTHERN CALIFORNIA COUNCIL OF UNITED ANGLERS OF CALIFORNIA

Mr. PAULK. Mr. Chairman, thank you for this opportunity to testify this afternoon. My name is Jim Paulk, and I am the Director of the Southern California Council of United Anglers of California, our State's largest fishery conservation organization.

I am pleased to have the opportunity to testify in favor of Senator Bradley's S. 484, which would provide important reforms of the Central Valley Project.

On behalf of the sportfishing anglers and sportfishing industry of our State, our organization wants you to know that we ardently support this bill.

United Anglers represents over 80,000 members including 75 affiliated fishing organizations. Our primary objective is to save, restore and enhance California's recreational fisheries.

Our organization was founded 10 years ago in response to the prolonged and tragic decline of our State fisheries and their habitat.

We have worked closely with State and Federal fishery agencies on the problems that it caused this extensive decline. Including those are the fisheries of the Central Valley and the San Francisco Bay Delta Estuary.

The striped bass, salmon, steelhead, shad and sturgeon fisheries of the estuaries spawn in the tributaries in the Central Valley, migrate through the Delta and bay and into the ocean.

As adults they return to their spawning grounds to reproduce in fresh water. Because their spawning and rearing habitat has been severely degraded by the development of water and agricultural land their natural reproduction has declined from 80 to 95 percent, depending upon the species and the run.

In addition to nearly destroying these public resources this has resulted in drastic economic consequences for our local, regional, State and National economies.

A report by the California Department of Fish and Game documents that the State of California lost some $3 billion over the past 20 years due to these fishery declines.

Should these low levels of fishery production persist the State will continue to loose nearly 200 million every year.

In 1985 the striped bass, salmon and steelhead of the Central Valley still manage to generate $113 million in sales revenues, $60 million in net disposable income and $50 million in direct payments to businesses.

It is pertinent for this committee to note that California's recreational angling industry generates some $4 billion to the state's economy annually. It therefore makes sound business sense to restore these valuable fishery resources.

The Central Valley fisheries are among the most prized in California. Yet until the introduction of this legislation little has been done by the Federal Government to offset the massive fishery impacts in the Central Valley Project, which has played such a significant role in their decline.

Because this bill would make it a fundamental obligation for the CVP to offset its fishery impacts and play the key role in helping to restore these resources that benefits the several million anglers who reside in California. Speaking on behalf of these anglers we know that they will support this bill.

The State of California has already taken significant steps to remedy the impacts to the Central Valley fisheries caused by this State Water Project. This effort includes a specific agreement between the California Department of Fish and Game and the Department of Water Resources to offset the direct impacts of this project.

This stands in sharp distinction to the Department of Interior's Bureau of Reclamation, which has had many opportunities to develop similar agreements but has failed to do so.

In many cases the BOR has cited the lack of congressional authority to take affirmative action. This legislation would solve this and related problems by making fish and wildlife a project purpose, and by mandating that the Federal Government, through the Department of Interior, undertake actions sufficient to restore the resources they have affected for over 40 years.

The legislation will therefore help in insure that our Federal Government becomes a good trustee of these valuable public resources, not only for our generation but for generations to come.

It will also help initiate a transformation of the project from one that benefits private enterprise to one that truly benefits the public and their resources.

This legislation's comprehensive framework would allow for needed restoration activities. Within this framework we would strongly urge that certain actions be given priority due to critical timing and funding needs of the fisheries which have been most affected by the project.

The estuary striped bass fishery has declined from an estimated 4 million adults, which existed in the early 1960's, to about 1 million adults today. Over the past 5 years it has suffered the worst spawning and survival of young fish in its history.

The artificial production of young striped bass has played a critical role in stabilizing this fishery and preventing its complete collapse.

The CVP delta pumping facility has nearly wiped out the run of striped bass that used to flourish in the San Joaquin River. While severely impacting the Sacramento River run.

Many billions of eggs and young striped bass have been entrained in the pumping facility without any positive mitigation from the CVP.

We therefore urge the committee the insure that Interior makes the restoration of this fishery a priority action.

The winter-run chinook salmon of the Sacramento River has also been adversely affected by the project, and it needs to be given priority treatment.

The most critical actions that need to be undertaken immediately by the BOR are not being expedited and properly funded by the BOR.

The fishery has been listed as a threatened species by the Federal Government and an endangered species by the State, and requires priority treatment.

The CVP's Friant Dam on the San Joaquin River has taken a terrible toll in this systems salmon. Dams on many of the rivers tributaries have exacerbated the problem to the point where 90-percent declines have become common.

When Friant came on line in the 1940's flow in the river was so reduced that the mainstem spring-run chinook salmon was lost. Restoration of these fisheries should also receive priority treatment.

In summary, this legislation has the capability of being considered historic, because its passage will mark the end of an era when it was acceptable to ignore our State's valuable fisheries in the process of developing California's water resources. Of even greater importance it will mark the decade of recovery for these fisheries which so many have worked so hard to achieve.

We urge this committee to pass S. 484 not just because the abuses of the past need to be properly addressed, but because this Government owes it to the citizens of our country and the State of California to take an affirmative leadership role in fulfilling its trusteeship of these resources. Should this Congress fail to take such a positive role California's Central Valley fisheries will surely continue their prolonged decline and many runs may cease to exist.

Thank you.

Senator **Bradley**. Thank you very much, Mr. Paulk.

And our last witness, Mr. Tom Graff, Environmental Defense Fund.

STATEMENT OF THOMAS J. GRAFF, SENIOR ATTORNEY, ENVIRONMENTAL DEFENSE FUND

Mr. **Graff**. Thank you, Mr. Chairman, thank you for sending me an invitation to testify before you today.

I am Tom Graff, Senior Attorney, for the Environmental Defense Funds California office.

Thank you in particular for asking me to testify in connection with your bill 484 on the subject of water transfers.

Encouragement of water transfers is as you know an integral part of S. 484, it is also the single most important policy prescription for improving the management of water in the western States.

For the last century and a half, the United States water policies in concert with the policies of the 17 western States have sought to encourage the storage, delivery and use, what once was called the conservation of water, to promote the settlement and economic development of the American west.

Until recently, however, water's value in place, in stream and free flowing to wetlands to terminal lakes or to the sea has not been recognized, nor has the scarcity and sound management in water, even in droughts like the one California is now experiencing, have been much acknowledged in western water law or policy.

If S. 484 were to be passed by Congress and signed into law by the President, would go far to reverse these historic tenants of western water, at least with respect to the operations of the Bureau of Reclamation's most extensive enterprise, the Central Valley Project of California.

Several of its provisions stand out and should be recognized.

First, fish and wildlife protection, restoration and enhancement, as the other members of this panel have indicated, are explicitly made a purpose of the Central Valley Project Act.

Many have argued that they are already a purpose of the act. What really is significant in S. 484, however, is that it contains not just general language promoting fish and wildlife protection, many other statutes have done that as well, but, also a variety of specific provisions which promise actually to address the problems which fish and wildlife currently face in California's Central Valley. For that emphasis on delivery of product rather than on mere rhetoric we applaud the bill's author.

Second, S. 484 addresses not only the needs of fish and wildlife, but also the need to have the Central Valley Project serve new urban and suburban customers in addition to its historic agricultural clientele.

After all, the Central Valley Project's construction was heavily subsidized by taxpayers contributions from citizens throughout the State and Nation. It is only fair to expand its potential beneficiaries to include nearly all of California's resident population.

Third, the fish and wildlife and municipal and industrial needs are both addressed by S. 484. What about its impacts on the Central Valley Projects traditional beneficiaries, particularly its agricultural water customers who in many cases have benefited from the CVP for 40 years and more?

The fact is, S. 484 would significantly reduce the historic public subsidies these project beneficiaries would receive in the future.

Upon contract renewal they will loose from 10 to 20 percent of the water to which they have become accustomed to over the years. I would note, however, that it does, as has been stated earlier in today's hearing, it would give certainty to these project customers, and at the moment I might add, although it has not been discussed earlier, the Environmental Protection Agency, the council on Environmental Quality and even the Justice Department have questioned the legality of simple renewal in the terms that the Bureau of Reclamation was proposing, and the courts are currently considering judicial attacks on those simple contract renewals. And if we do not pass legislation Congress does not act, I think we are condemned to uncertainty and lengthy litigation on that point.

The agricultural beneficiaries will also pay together with project power customers a surcharge totalling $30 million per year, as the Chairman has noted earlier, that is, however, capped.

Those who have drainage problems face additional obligations, all are subject to enforceable conservation requirements, and perhaps most significant, should any of the contractors determine to transfer some of their remaining contractual entitlement 25 percent of the profits or of the water involved in the transfer transaction is reserved for protection of the environment.

While some no doubt will argue that this combination of provisions is unduly onerous to the community of historic project beneficiaries, indeed they did earlier today, they should consider that one important benefit may offset many of these losses. That benefit is the authority explicitly granted in this legislation to permit project contractors to re-sell the water that they receive at heavily subsidized rates far below the water's value to any buyer in the State for an unlimited profit subject only to a repayment requirement and the transfer tax referred to above.

EDF strongly supports this provision in the legislation because it creates a powerful incentive for conservation and because it provides for fair compensation to those who have historically come to rely on the delivery of inexpensive water by the bureau.

The farm community, particularly those in the CVP service area, no doubt will strongly oppose other provisions in S. 484 which adversely impact their water supply, their financial position and their freedom from regulatory requirements.

But, they should welcome the voluntary water transfer authority, which this legislation provides. So should the Bureau of Reclamation and so should even the Office of Management and Budget.

These Federal bureaucracies should support this authority because it was broaden the project's benefits, because it will lead to a more productive California economy and because it will make the operation and the management of the CVP more flexible and more efficient.

As the struggles and the negotiations over S. 484 begin one thing is clear, water transfers which permit significant profits to be made by the project's contractors are the principal new benefit which these contractors will obtain from this legislation in partial exchange for the losses they perceive they are suffering elsewhere.

CVP contractors have historically purchased around 20 percent of the States consumptively used water supply. To bring this water explicitly into a California water rights market will benefit not only the contractors but the whole State.

I also wanted, Mr. Chairman, to comment on two matters that came up earlier in the day today. One is the subject of consensus. As you may know I am a part of several efforts where consensus processes are underway in California.

I would say, however, that these processes are not a substitute for the legislative process. I personally would be pleased to discuss this bill and others with fellow negotiators, but if the rules of the game were that no legislation can be considered and acted upon until consensus deliberations are concluded, I would have to consider very carefully whether it is appropriate to continue in such consensus discussions.

I do not think that indeed is what is expected. Others—Mr. Peltier, will testify later, Mr. Clark, who is on the list of witnesses—are also involved in these discussions, and I think it would be appropriate to see what their views are on this subject as well.

Finally on the subject of States rights, I participated in two cases leading to U.S. Supreme Court decisions upholding the rights of the

State of California vis-a-vis the operations of the Bureau of Reclamation and the United States.

In the case of *U.S.* v. *California* and the case of *Environmental Defense Fund* v. *East Bay MUD.* I see nothing in this bill that undermines the State role in setting water policy and management in this State vis-a-vis the CVP.

In fact, Congress, if it passed this bill, would generally bring the Federal Government into a position corresponding to State law if not always to State practice. Congress, it seems to me, has a responsibility to modernize the CVP largely in accordance with State law. S. 484 would do just that and for that reason the Environmental Defense Fund supports the bill.

[The prepared statement of Mr. Graff follows:]

PREPARED STATEMENT OF THOMAS J. GRAFF, ENVIRONMENTAL DEFENSE FUND

Senator Bradley and Members of the Subcommittee: Thank you for extending me an invitation to testify before you today. I am Thomas J. Graff, Senior Attorney for the Environmental Defense Fund's California office. EDF is a national, not-for-profit membership organization, whose general objective is environmental protection. EDF's California office places special emphasis on the problems of water resource allocation and water quality in the western states. I have been employed by EDF since 1971, and during my tenure with EDF have also served on various water resource-related boards and committees, including the Colorado River Board of California, the Delta Environment Advisory Committee, the San Joaquin Valley Drainage Program Citizens Advisory Committee, and the National Academy of Sciences Committee on Western Water Management Change.

Mr. Chairman, you have called this hearing to discuss S. 484, your bill "to establish conditions for the sale and delivery of water from the Central Valley Project, a Bureau of Reclamation facility, and for other purposes." In particular, in connection with your bill, you have asked me to address water transfers. The encouragement of water transfers is an integral part of S. 484. It is also the single most important policy prescription for improving the management of water in the western states.

For the last century and a half, the United States' water policies, in concert with the policies of the 17 western states, have sought to encourage the storage, delivery and use (what once was called the "conservation") of water to promote the settlement and economic development of the American West. Much of the American West is arid or semi-arid; yet, our water resource policies historically have been designed to encourage the consumptive use of water. Until recently, water's value in place, in-stream, and free-flowing to wetlands, to terminal lakes, or to the sea, has not been recognized. Nor has the scarcity of water, even in droughts like the one California is now experiencing, been much acknowledged in western water law or policy.

S. 484, were it to be passed by Congress and signed into law by the President, would go far to reverse those historic tenets of western water law, at least with respect to the operations of the Bureau of Reclamation's most extensive enterprise, the Central Valley Project of California. The bill is extraordinarily broad in its scope. This testimony is not the place to address all its myriad provisions. But several of these provisions do stand out and should be recognized.

First, fish and wildlife protection, restoration and enhancement are explicitly made a purpose of the Central Valley Project Act. Many have argued that they are already a purpose of the Act. What really is significant in S. 484, however, is that it contains not just general language promoting fish and wildlife protection (many other statutes have done that as well), but also a variety of specific provisions which promise actually to address the problems which fish and wildlife currently face in California's Central Valley. For that emphasis on delivery of product rather than on more rhetoric, we applaud the bill's author.

Second, S. 484 addresses not only the needs of fish and wildlife, but also the need to have the Central Valley Project serve new urban and suburban customers, in addition to its historic agricultural clientele. After all, the Central Valley Project's construction was heavily subsidized by taxpayers' contributions from citizens throughout the state and nation. It is only fair to expand its potential beneficiaries to include nearly all of California's resident population.

Third, if fish and wildlife and municipal and industrial needs are both addressed by S. 484, what about its impacts on the Central Valley Project's traditional beneficiaries, particularly its agricultural water customers who in many cases have benefited from the CVP's largesse for forty years and more? The fact is S. 484 would significantly reduce the historic public subsidy these project beneficiaries will receive in the future. Upon contract renewal, they will lose from 10 to 20 percent of the water to which they have become accustomed over the years. They will also pay a surcharge (together with project power customers) totalling $30 million per year. Those who have drainage problems face additional obligations. All are subject to enforceable conservation requirements. And perhaps most significant, should they determine to transfer some of their remaining contractual entitlement, 25 percent of the profits or of the water involved in the transfer transaction is reserved for the protection of the environment.

While some no doubt will argue that this combination of provisions is unduly onerous to the community of historic project beneficiaries, they should consider that one important benefit may offset many of their losses. That benefit is the authority explicitly granted in this legislation to permit project contractors to resell the water they receive (at heavily subsidized rates far below the water's value) to any buyer in the state for an unlimited profit, subject only to a repayment requirement and the transfer tax referred to above.

EDF strongly supports this provision in the legislation, because it creates a powerful incentive for conservation and because it provides for fair compensation to those who have historically come to rely on the delivery of inexpensive water by the Bureau of Reclamation. The farm community, particularly those in the CVP service area, will no doubt strongly oppose the other provisions in S. 484 which adversely impact their water supply, their financial position, and their freedom from regulatory requirements. But they should welcome the voluntary water transfer authority which this legislation provides. So should the Bureau of Reclamation and so should even the Office of Management and Budget. These federal bureaucracies should support this authority because it will broaden the project's benefits, because it will lead to a more productive California economy, and because it will make the operation and management of the CVP more flexible and more efficient.

As the struggles and the negotiations over S. 484 begin, one thing is clear. Water transfers, which permit significant profits to be made by the project's contractors, are the principal new benefit which these contractors will obtain from this legislation, in partial exchange for the losses they suffer elsewhere. CVP contractors have historically purchased around 20 percent of the state's consumptively used water supply. To bring this water explicitly into a California water rights market will benefit not only the contractors but the whole state.

Mr. Chairman, as I stated before, S. 484 is a complex piece of legislation. We will have specific suggestions for improvements in the legislation which we will pass along to your staff. We also recognize that some compromises may be necessary or desirable in order to enable the bill to become law. But overall we congratulate you upon your vision in introducing this bill. I would venture to say that you have moved the agenda of progressive reform of federal and California water policy many steps forward.

Thank you again for inviting me to testify. I would be pleased to address any questions you may have now and as the legislation moves through the Congress.

Senator BRADLEY. Thank you very much, Mr. Graff, for your testimony. And let me thank the entire panel for their testimony.

Let me, if I could, just ask a few questions.

Mr. Dunning, you suggest that we make three changes in the bill. One is to be careful about setting aside 100,000 acre feet of the uncommitted CVP water for urban use.

Mr. DUNNING. Yes.

Senator BRADLEY. And second, the absence of certain estuary issues. And third, the need to specifically recognize the California Public Trust Doctrine.

Mr. DUNNING. Yes.

Senator BRADLEY. Now, in terms of the first suggestion that you make, water transfers from your standpoint ought to be permissible between any willing seller and any willing buyer, is that not true?

Mr. DUNNING. Absolutely. We really view that as the key tool in the bill for reallocation to have transfers with compensation where appropriate. We would enter an observation that you have got to look at the environmental consequences of particular transfers. I think there is a lot to be said in favor of this water transfer idea, which is rapidly taking root in the west.

But, there are situations where transfers can actually be damaging to the environment. I think what we are looking at is brokerage situations. This is not going to be a securities market or an auctions market, this is going to be brokered transactions as with the water banks that are being operated today.

Senator BRADLEY. Now, if there were brokered arrangement and an open water transfer opportunity there has been today the question raised, well, that will mean taking all the water away from agriculture and giving it to urban users or whoever would pay the highest amount.

Is there any provision in California water law or in California law generally that would allow the governor to make sure that that did not happen?

Mr. DUNNING. Not at present. I think the key question is what happens to the money. There are fears, understandable fears in the farming community that individuals will sell out and run off with the money and never be seen again, and there are all these detrimental impacts economically on others.

But, in many, many situations water can be used a lot more efficiently, but it takes money, it takes investment. And this is a source of those investment funds.

So, it seems to me often the ideal kind of water transfer situation when we are talking about AG to M&I, is where the cities provide the money to the farmers who invest that money or some part of the money in approving their operation. Lining their ditches, switching to drip, there are all kinds of different things, laser leveling of fields, all kinds of things can be done. And very often I think it is the case that with an investment of capital into the agricultural enterprise you can maintain the same production with less water.

It seems to me this is the model we have in the transaction that has involved Imperial Irrigation District, and Metropolitan Water District. It took several years to negotiate that, but it is a model that maybe is the best one to look at and think about, rather than think about farmers just selling out, leaving their land, running off and all kinds of problems happening. It has happened sometimes inside the Arkansas River Valley and Colorado.

Senator BRADLEY. So, what then is your objection to the specific 100,000 acre feet, if you have no objection from an agricultural sale to municipal or industrial use?

Mr. DUNNING. The difference is with the agricultural to M&I we are talking about already committed yield from the project. It is committed to agriculture as a result of the transaction.

Senator BRADLEY. So, your problem is that the 100,000 was uncommitted.

Mr. DUNNING. It is the uncommitted and the fact that this is new demand on the natural system, which is already very heavily stressed. That is the problem from our point of view.

Senator BRADLEY. Doesn't the California Water Resources Board have the power to limit transfer for any purpose?

Mr. DUNNING. It depends on who is doing the transferring. In some cases, yes, in some cases, no. If it is one of their permitees who is making a transfer to somebody else who is going to use it with a different point of diversion, different place of use and so forth, then it has to go through a change process, and approval process. But, there are situations where there does not have to be any board approval.

I do not think, and Mr. Graff can tell you about this also, but, I do not think the IID-MWD transaction has gone through any kind of board review. So, it depends on the situation.

Senator BRADLEY. Your point on the Public Trust Doctrine, once again that we would add that to the legislation so as to reemphasize that Public Trust Doctrine would supersede any other use of the CVP, is that not correct?

Mr. DUNNING. No, that is not precisely what it said. In the Audubon decision Justice Broussard and the rest of that court indicated that you have to integrate Public Trust concerns with the traditional prior appropriation system of water rights, and where feasible he said, operate projects to protect the Public Trust.

It is not correct to say that it is just Public Trust values and the heck with anything else. That is not the learning in Audubon, it is what some people now refer to as a balancing process, which has to be gone through.

I neglected to mention, incidentally, the Public Trust Doctrine really grew from some New Jersey cases, 1821 in New Jersey there was a dispute over oyster beds in Raritan Bay, and that is where there was a very powerful development of this idea. So, it is a New Jersey idea that at long last we have adopted to our water rights situation here in California.

Senator BRADLEY. That is a little known fact that I am sure will be long remembered.

[Laughter.]

Mr. DUNNING. I am hoping to publicize it a bit.

Senator BRADLEY. Well, then my question is: If it is a balancing process, who makes that ultimate decision on the balance?

Mr. DUNNING. Well, Public Trust litigation has been going on in the courts. It was one of the issues in the *Audubon* case, whether it had to be initially in the Water Board or whether it could be initially in the courts. It has been going on in the courts and it should be going on in the board too, because the court indicated that the State Water Resources Control Board in making its decisions of various kinds is mandated to take into account the Public Trust.

In the lower *American River* case, which is recently concluded, there was a case in the courts, this is the *EDF* v. *East Bay MUD* case, which Mr. Graff referred to. The case began in the courts, they referred it to the board for advice, the board did some balancing and gave their advice to the court and the court, however, made its own decision in the end. And really ended up by allowing East Bay Mud to maintain its point of diversion well up the American River system. That was one of the issues, should they have to divert further down in the system, down in the Delta, for example.

The court said they could maintain their point of diversion if and when they exercised their contractual rights with the Bureau of Reclamation, but they would be subject to quite a stringent flow regime in order to protect Public Trust values.

So, that is our first real example of the Public Trust in action, and operating to modify somewhat what these water development entities can do in exercising their rights.

Senator BRADLEY. In the bill we specifically deferred to State law, and the whole body of state law, including obviously Public Trust Doctrine.

Why in your view do we need to specifically refer to Public Trust?

Mr. DUNNING. You not only defer you call on the bureau to develop programs, to be pro-active and reach out and develop ways of meeting the requirements of State law, and you do that with regard to 5937, the Fish and Game Code section I mentioned.

My concern would be the bureau would say, well, Congress has directed this one, but they did not say anything about the Public Trust.

Senator BRADLEY. So, your point is if you eliminated the deferral on the first you then would not need the Public Trust, or you need both?

Mr. DUNNING. I think the safest thing is simply would be relatively simple, and I think there is actually language in the statements submitted by the State Lands Commission, as to how that provision could be modified to incorporate a reference to the Public Trust, a program for implementation by the bureau that is Public Trust responsibilities alone with section 5937.

Many people have regarded 5937 as a legislative expression of the Public Trust Doctrine. That is fine, but it is limited to fish, and we are talking here about fish and wildlife.

Senator BRADLEY. Mr. Bingham, let me ask you, what is the amount, the dollar value of the fish that have been injured or have been destroyed by the CVP?

Mr. BINGHAM. As I stated earlier in my testimony unfortunately no comprehensive assessment of the overall damage to the fisheries has in fact been done. So, I am going to have to hazard a guess for you.

You can look at some statistics with California Land, for example, in 1988, which was a run that came off of the wet years, and you have to look 3 or 4 years down from the brood cycle.

We have a 14 million pound season valued at $2.65, which was a record season. Two years later in 1990 we had only a 4 million pound run, the first year where the drought was beginning to make its effects. Again, use that multiplier of around $2.70 for that season and you can see the kind of catastrophic losses that have occurred.

But, it is difficult to single out exactly what the project impact has done simply because the overall analysis has never really been performed. I invite you to consider again the figures that I gave you earlier in my testimony regarding the impacts of just one project, where 25 adult equivalent winter-run fish were destroyed and the fishery was shut down, just as I predicted to in my testimony a year ago, we would be shut down with the Endangered Species

Act, and we are being shut down now. That shut down is only going to save 20 fish, and I was only talking about one project impact, there are at least four other major ones.

One other case to look at is on the Columbia River where it is estimated they have done a comprehensive study there, and they found out that 95 percent of the human-caused mortality on salmon is caused by hydropower projects. Five percent is caused by harvest. And the hydropower people are saying on the Columbia they are not going to do anything about providing additional flows for fish passage unless in good faith the fishing industry takes a head.

We are not talking about equity here, we are talking about some kind of cosmetics.

Senator BRADLEY. Particularly when compared to the Columbia River Basin agreement?

Mr. BINGHAM. Yes. And I think the human-cause facts from nonfishing mortality are relative. I would say that just guessing at it I would say it is on the order of 90 to 95 percent.

But, there are no studies to support my estimate.

Senator BRADLEY. I would like to ask, Mr. Graff and Mr. Suagee, if you could we heard earlier an expression of concern about the impacts of water transfers out of the Central Valley south to Southern California.

Do you feel that there is any parallel argument about transfers of water out of the Trinity River Basin to the Central Valley?

We have heard the argument; we do not want to take it out of the Central Valley and move it south, but in taking out of the Trinity and putting it into Shasta and moving it south you are essentially taking it out of the Trinity River.

Do you have any comment on that?

Mr. GRAFF. One of the complicated issues in Western water law that you are addressing I think with this question is who owns the water to allow it to be transferred.

In the case of the Trinity diversion to Sacramento and then south, no one was compensated for that diversion, it was simply done as part of legislation of the Congress in an earlier era.

It seems to me that what the voluntary transfer regime generally would do though nowadays is compensate at least those who hold the formal water rights, mostly growers and/or water districts. And the really complicated question I think that is raised is what happens to the so-called secondary impact to communities involved.

Under State law currently for the most part in one way or another those local impacts are indeed being considered. I think I would depart a little bit from the answer that Professor Dunning gave you earlier, in that in the case of IID–MWD, first of all, IID is an entity that is voted into office by all the residents of that region, so their impacts were considered in a sense by the sellers themselves. And the transfer in fact took place under the shadow of pressure from the State Water Resources Control Board, which in most cases has the authority to review local as well as environmental impacts on transfers.

I do think this is a dynamic situation though. We heard Mr. Wheeler and Mr. Kennedy testify earlier they are trying to put together on a very crash basis in this drought year large blocks of water transfers.

My understanding is that the first large block of roughly 250,000 acre feet is all coming from one region, namely the Delta, where a large amount of land is to be fallowed and the water that would otherwise go to that land would be transferred. And as far as I know at this point no special consideration is being given to community impacts in that area by the State officials involved.

Senator BRADLEY. Mr. Suagee, you obviously have experienced the effects of this transfer, is there a parallel argument for the tribe to make as well as for the various communities in the Central Valley in the event of out of basin transfers?

Mr. SUAGEE. There probably is. You were discussing before with Mr. Dunning whether there would be some kind of regulatory mechanism that would address the wisdom and the coordination of these kinds of transfers, and I believe the response was sometimes there would be, but sometimes there might not be.

In the situation on the Trinity you have seen so much water taken out and it is taken out of a basin that is not getting anything back. So, it is a one-way process. Obviously the impacts are severe when you have the consistent 28 years taking 80 to 90 percent of the flow. Those are just gargantuan impacts.

One would assume that the kinds of transfer provisions that would be crafted for the rest of the CVP would at least take some sort of lesson from this blind unregulated one way delivery of water out of our basin and into Sacramento.

Senator BRADLEY. So, basically you are arguing that if water is taken out of the CVP and moved south that there has to be some compensation or some effort for those communities that have been hardest hit by that transfer, is that not correct?

Mr. SUAGEE. As a general matter you have got to look at that, certainly.

Senator BRADLEY. And by analogy would you argue that therefore the tribe also has a certain claim to be compensated?

Mr. SUAGEE. I think that is out there, certainly. As far as protecting the river we are much more concerned with keeping the water in the river, but we are certainly open to methods for addressing non-intercourse act problems that may yet remain as obstacles in this day and age to the transfer of Federal Trust Water Assets as opposed to the other kinds of waters that the CVP deals with.

Senator BRADLEY. All right. What I would like to do, most of you have commented on your testimony on the various provisions of the bill, and I think I know how you feel about the major provisions.

I would simply like to get your thought on a number of them, and I would like to give the provision and have you go down the line and tell me yes or no or maybe.

On the set aside of 100,000, Mr. Dunning has said no, he wants all the uncommitted water for fish and wildlife. And I think that more or less that view is understood.

I am not sure where you all are on the 40-year contract issue. I think that you see the provision of the bill that allows for use of water for fish and wildlife on renewal of contracts to be positive.

Is that correct, Mr. Suagee?

Mr. **Suagee**. Yes.

Senator **Bradley**. Mr. Graff.

Mr. **Graff**. Before you go skipping to that I would take issue with the position of the Bay Institute on the 100,000 acre feet, on the following basis, I agree that if nothing else were done in the legislation but for that, and the result would be 100,000 acre feet of reduction in available water to the estuary, we would oppose the bill on that basis.

But, there is so much more in the bill which will offset that amount of water and will provide additional water for environmental values, including ultimately Bay Delta values, that for us the trade off seems worth it.

Senator **Bradley**. And on the contract?

Mr. **Graff**. We support that.

Senator **Bradley**. Mr. Bingham.

Mr. **Bingham**. On the first issue I would agree with the Bay Institute position. On the second issue all I can say is that I would like to get a contract to have a guaranteed fishing season every year.

[Laughter.]

Senator **Bradley**. Mr. Winther.

Mr. **Winther**. I am okay on the 100,000 acre feet to urban use provided that the environmental provisions go along with it. And on the long term contracts, they are essential. If they become real long term contracts they will also have escalators in them.

Senator **Bradley**. So, you would support the renewal with the portion of the water set aside for fish and wildlife?

Mr. **Winther**. I view that as a separate question in terms of the length of the contract by itself. I think it is a price that is going to have to be paid, and as long as that has the environmental benefit attached to it I would say it would be fine.

Mr. **Paulk**. Yes, we are in agreement with both of those.

Senator **Bradley**. I think that I understand where all of you are on the State law issue and on the 25-percent fee—charge tax—whatever you want to call it, and on the fish and wildlife provisions, the equitable and the setting of the targets for the wildlife refuges and for the fisheries.

On the restoration fund the source of funding coming from power and water, are all of you in support of that as a funding source for the repair of fish and wildlife?

Mr. **Suagee**. I had a comment on the State law issue.

Senator **Bradley**. No, I do not want anymore comments on the State law.

Mr. **Suagee**. Okay. Yes.

Mr. **Graff**. Yes. But, I would also look at an additional source of funding which came up earlier today, namely the hydro-licensing for public and private power users in the State where they have had access to the streams of California essentially for free for many years, and I think could fairly be asked to contribute as well.

Mr. **Bingham**. Yes.

Mr. **Winther**. I think it is a good program. But, I added my testimony to this concept of having something in it for the communities.

Senator **Bradley**. Right. I think that is one of the things that have come out of the hearing so far today, that clearly we need to modify to take into account of any impact on the communities in the valley.

Mr. **Bingham**. Could I add a comment. Our communities on the north coast are suffering heavily, and if there is going to be community relief looked at for farm committees I would like you to come up and visit us in Eureka where they have not had a fishing season for 4 years, and their timber industry has been devastated. If you want to see some long term suffering come up and visit where I live, and we would like to get in on that too.

Senator **Bradley**. Well, Mr. Bingham, thank you very much, I can appreciate that.

Let me thank the whole panel for your thoughtful testimony, it was very helpful and I will look forward to working with you in the weeks and months ahead. And I hope that we will be able to stay in touch.

Our last panel for today consists of, Bette Boatmun, President of the Board, Contra Costa Water District; Judith Redmond, California Action Network; and Jason Peltier, who is the Manager of Central Valley Project Water Association.

Welcome to the committee, and I hope that you will follow the practice of limiting your testimony to 8 minutes so that we can get to questions. And if you go over a little bit that will be all right too, but try to be close to the target.

Ms. Boatmun.

STATEMENT OF BETTE BOATMUN, PRESIDENT, BOARD OF DIRECTORS, CONTRA COSTA WATER DISTRICT

Ms. **Boatmun**. Thank you very much. I will take your suggestion and limit my comments that will be in the testimony.

I serve as President of the Board of Directors of the Contra Costa Water District, which is located approximately 30 miles east of San Francisco.

We appreciate this opportunity to discuss the extreme importance of the Central Valley Project to Contra Costa and its service area, and to present our views on S. 484, the Central Valley Project Improvement Act.

Contra Costa is an independent public agency, which provides raw and treated water to 400,000 customers in Central and Eastern Contra Costa County. The district supplies water for industrial and agricultural purposes as well as residential uses.

As a publicly owned agency the water district rates are set not to make a profit, but to provide adequate funds for efficient operation and to finance needed capital improvements.

Contra Costa was the first unit of the Central Valley Project and it continues to rely solely upon the CVP for its water. The water districts water source is the Sacramento/San Joaquin Delta, an intricate delicately balanced environmental situation that is suffering from increased degradation of its water quantity and marine habitat.

Since its inception in 1936 the district has battled the protect the water quality at Rock Slough intake, recognized State-wide as a gauge of the Delta's condition.

As one of the few users that depends directly and solely upon the Delta for drinking water CCWD finds itself embroiled in nearly every battle that ensues over water. Just about every one, there is few we ever get out of.

The future of Contra Costa's water supply depend on a strong healthy Delta. The district will continue to protect its source of water and monitor the Delta's condition while diverters, agribusiness, recreationists and environmentalists vie for the use of CVP water.

More specific CCWD is taking action to protect and conserve its vital water supply through the use of best management practices, water conservation measures and waste water recycling. The district is also planning to build 100,000 acre foot reservoir, the Los Vaqueros Reservoir Project to store Delta water when its quality is at its best. And more significantly the $450 million of this project is financed solely by our rate payers without any State or Federal assistance.

The district is concerned about the reliability of CVP water. Based upon the initial legislation authorizing the Central Valley Project the water district has relied upon the CVP to provide a stable, dependable water supply.

The districts water contracts and finances depend upon a certain level of CVP delivery and project costs. Contra Costa Water District is concerned that in an attempt to address drought conditions the State is considering relaxing Delta water quality standards. We believe that this will allow the withdrawal of Delta water with an elevated salt content, and this will serve only to decrease the dwindling supply of Delta water and could result in negative impacts upon our customers.

If Contra Costa Water District is to fulfill its obligation to provide a safe and reliable source of water to its customers the district must be certain that the CVP will deliver on its contractual agreement. If not our district must be prepared to bid for other water.

The Contra Costa Water District supports the overall thrust of S. 484, because it seeks to establish long term comprehensive policy to mitigate the degradation of California's natural environment.

In particular CCWD endorses those provisions of the bill that would amend the Warren Act to authorize the use of project facilities and non-project water, which you have in subsection 8(e). The district also enthusiastically supports the mandatory best management practices program for water conservation contained in 8(g) of the bill. And in fact the water district urges all CVP users to follow its lead by implementing immediately on a voluntary basis the best management practices called for in your bill.

Given the CVP's inability to fully deliver its current commitments CCWD suggests that Congress consider prohibiting the Bureau of Reclamation from entering into any additional contracts for CVP water until their ability to deliver water reliably under its existing contractual commitments can be examined and until appropriate environmental conditions and commitments to the Indian tribes have been identified.

Finally, Mr. Chairman, I wish to raise Contra Costa Water District's concern about the costs associated with your bill. Our district through the Los Vaqueros Reservoir Project is really working to ensure reliable high quality water supply for its customers that takes into account the service areas needs during extended drought conditions and potential emergency.

The district taxpayers are shouldering the costs associated with the building of the new reservoir. Thus the additional costs that S. 484 would impose on our customers are certainly a great concern to us.

Thank you.

[The prepared statement of Ms. Boatmun follows:]

PREPARED STATEMENT OF BETTE BOATMUN, PRESIDENT, BOARD OF DIRECTORS, CONTRA COSTA WATER DISTRICT

INTRODUCTION

Good afternoon, Mr. Chairman. My name is Bette Boatmun, and I serve as President of the Board of Directors of the Contra Costa Water District (CCWD), located 30 miles east of San Francisco. I greatly appreciate the opportunity to appear before you today to discuss the extreme importance of the Central Valley Project (CVP) to CCWD and its service area and to present CCWD's views on S. 484, the Central Valley Project Improvement Act.

BACKGROUND

CCWD is an independent public agency that provides raw and treated water to 400,000 customers in Central and Eastern Contra Costa County. The District supplies water for industrial and agricultural purposes as well as residential uses. As a publicly-owned agency, CCWD's rates are set not to make a profit, but to provide adequate funds for efficient operation and to finance needed capital improvements.

CCWD's Relationship to the Central Valley Project (CVP)

CCWD was the first unit of the Central Valley Project and it continues to rely solely upon the CVP for its water. CCWD's water source is the Sacramento-San Joaquin Delta, an intricate, delicately balanced environment that is suffering from increased degradation of its water quality and marine habitat. Since its inception in 1936, the District has battled to protect the water quality at its Rock Slough intake, recognized Statewide as a gauge of the Delta's condition. As one of the few users that depend directly and solely upon the Delta for drinking water, CCWD finds itself embroiled in nearly every battle that ensues over water.

The future of CCWD's water supply depends on a strong, healthy Delta. CCWD will continue to protect its source of water and monitor the Delta's condition while diverters, agribusiness, recreationists, and environmentalists vie for the use of CVP waters. More specifically, CCWD is taking action to protect and conserve its vital water supply through the use of best management practices, water conservation measures, and waste water recycling. The District is also planning to build a 100,000 acre-foot reservoir, the Los Vaqueros Reservoir Project, to store Delta water when its quality is at its best. And, more significantly, this $450 million project is financed solely by CCWD's ratepayers, without any State or Federal funds.

CCWD is concerned about the reliability of CVP water. Based upon the initial legislation authorizing the Central Valley Project, CCWD has relied upon the CVP to provide a stable, dependable water supply. The District's water contracts and finances depend upon a certain level of CVP delivery and project costs. CCWD is concerned that in an attempt to address drought conditions, the State is considering relaxing Delta water quality standards. We believe that this will allow the withdrawal of Delta water with an elevated salt content. This will serve only to decrease a dwindling supply of Delta water and could result in negative impacts for CCWD's customers.

If CCWD is to fulfill its obligation to provide a safe and reliable source of water to its customers, the District must be certain that the CVP will deliver on its contractual commitment. If not, CCWD must be prepared to bid for other water.

CCWD's Capital Improvements/The Los Vaqueros Reservoir Project

On November 8, 1988, the voters of Contra Costa County approved an initiative to provide full funding for the development of the Los Vaqueros Reservoir. The purpose of this project is twofold. First, the reservoir will address the water quality problem that results during dry seasons when the Delta's water flows are reduced and salt water from San Francisco Bay intrudes upstream—a problem for both CCWD's residential and industrial customers.

Second, the new reservoir will also provide a desperately needed emergency water back-up to protect CCWD's water supply from toxic spills, levee failure, or natural disaster in the Delta. (The District's current supply system provides only for a three to four day emergency water supply.) The Los Vaqueros Reservoir will enable the District to store up to 100,000 acre-feet of high quality spring runoff in Contra Costa County on Kellogg Creek, an intermittent stream tributary to the Sacramento-San Joaquin Delta. This high quality water can then be blended with Delta flows in the drier months of the year, in drought years or during emergencies, thereby ensuring consistent water quality. (The new reservoir is not intended to decrease CCWD's imported water supply.)

CCWD is committed to the long-term management of the watershed, integrating protection of reservoir water quality, protection of environmental resources, provision of appropriate public recreation, continued operation of wind farms and agricultural production, and other appropriate land uses. The Los Vaqueros Reservoir Project enjoys a broad base of Community and political support, including the support of CCWD's distinguished Member of Congress, the Honorable George Miller.

SPECIFIC COMMENTS ON S. 484

The Contra Costa Water District supports the overall thrust of S. 484, Mr. Chairman, because it seeks to establish a long term, comprehensive policy to mitigate the degradation of California's natural environment.

In particular, CCWD endorses those provisions of the bill that would amend the Warren Act to authorize the use of project facilities for non-project water (subsection 8(e)). The District also enthusiastically supports the mandatory best management practices program for water conservation contained in subsection 8(g) of S. 484. In fact, CCWD urges all CVP users to follow its lead by implementing immediately—on a voluntary basis—the best management practices called for in the Bradley bill.

Given the CVP's inability to fully deliver its current commitments, CCWD suggests that Congress consider prohibiting the Bureau of Reclamation from entering into any additional contracts for CVP water until the CVP's ability to deliver water reliably under its existing contractual commitments can be examined and until appropriate environmental considerations and commitments to Indian tribes have been identified.

Finally, Mr. Chairman, I wish to raise CCWD's concern about the costs associated with your bill. CCWD, through the Los Vaqueros Reservoir Project, is working to ensure a reliable, high quality water supply for its customers that takes into account the service area's needs during extended drought conditions and potential emergencies. The District's ratepayers are shouldering the costs associated with the building of the new reservoir. Thus, the additional costs that S. 484 would impose on CCWD and its customers are certainly of great concern to the District.

Senator **Bradley**. Thank you very much, Ms. Boatmun.

Ms. Redmond.

STATEMENT OF JUDITH REDMOND, EXECUTIVE DIRECTOR, CALIFORNIA ACTION NETWORK

Ms. **Redmond**. I am a farmer in Yolo County. Our certified organic farm of 120 acres is the sole source of support for two families, including four adults and three children.

We employ between 5 and 10 additional people year round, and grow a diversified line of fresh produce, 50 acres of nuts.

I am the only one of the four farm partners that is not a full-time farmer. I am also the Executive Director of the California Action Network, a 14 year old State-wide membership organization with chapters in Davis, Fresno and Salinas.

The majority of our members live in agricultural areas, some of them are farmers. We have a history of activism on water issues. We worked hard for the passage of several pieces of California legislation to protect ground water and to promote research into sustainable agriculture.

We have also been active in demanding implementation of Reclamation Law acreage limitations.

So, consistent with that history is our support for the objectives of your bill. However, we are convinced that the bill needs some amendments, because without certain amendments we think that those environmental objectives will not be met.

One of our main areas of concern is the social impacts of that bill on the people who live in the environments that the bill aims to restore.

Because we have many members living in the valley, and I was glad to hear that you had been to Fresno, which I think perhaps some of the people here today had not. We think that the needs, the insights, the history and in short the culture of the people in the Central Valley needs to be considered in this bill.

In my written testimony I have outlined four areas that I think need attention.

To suppose that the trust and fund, for example, should restore patches of Central Valley environment while nearby communities lack adequate health care and educational facilities I think is wrong. And to deny that the problems that I outlined in my testimony of community impoverishment are not connected historically with the environmental degradation that you hope to address, I think is to deny the history of the Central Valley Project and irrigated agriculture.

We believe that Bureau of Reclamation policies have historically resulted in the concentration of power and wealth amongst a relative handful of farms, a very small number of farms that actually control a tremendous amount of resources in this State. And unfortunately that wealth is not always trickled down into valley communities.

I guess the point that I am making is that it is not just a problem that is going to occur once those water transfers are made, it is a historic problem that has historically been associated with bureau policy. So, it is as much of a problem that needs to be addressed as the environmental problems that you I think have been giving your attention to in this bill. And I do not think that the two problems of community impoverishment and poverty that exists in the Central Valley today and environmental degradation, I do not think that those two problems can be addressed separately.

I think that if you look at them separately you may actually exacerbate the social problems that exist or simply move the environmental problems to other areas.

You have probably heard some of the statistics about the Central Valley, and I do outline some of them in my written testimony. They show that many agricultural communities in the Central Valley, although tremendously productive of agricultural commodities are also areas of great poverty and need.

But, I think there is another factor about rural communities that sometimes gets overlooked, and that is that they are unique and have many special qualities. That people living in cities as well as people living in the rural areas recognize, and one of the reasons I know is because I go to the farmers markets and I often invite my customers there to our farm, because they are always expressing frustration with living in the city. And I do not really think that that conception that they have of rural living is a completely romanticized conception. I think that rural communities are safer, people are more likely to go out of their way for each other and help each other out in a pinch. They know and recognize each other more often than they do in the cities, and in fact there is a certain sense of social cohesion that exists in rural communities that does not exist in urban areas.

So, I think that aside from the statistics about rural areas is just this issue that a demise of a rural culture would be a loss and a reduction in options and opportunities for all of us. It is not just something that would effect people in the valley.

So, my written testimony as I said addresses these concerns and outlines four areas of the bill that I believe need to be amended. We are concerned about both environmental and social impacts of the bill. The first area that we discuss in the testimony is the effect that unregulated water marketing would have on ground water aquifers. Many of our farmers have been third and fourth generation farmers, they do rely on ground water for irrigation and we have seen in California as a result of the drought that there has been an encouragement of farmers to sell their surface water. But, they wish to continue growing crops so they pump ground water and continue to grow crops, in effect, using twice as much water as they were in the past.

I think that if you completely open up water marketing in this State that is going to happen. In fact Jim Costa has introduced legislation that would say that such sell policies were a beneficial use of the ground water. We feel that that is just mining of the ground water and should not be a loophole opened up by water marketing.

Another aspect of water marketing is that transferring the water away from communities is a transfer of a key economic resource. As other people have pointed out it is going to result in a loss of jobs and economic opportunities, not just for farmers in those communities.

So, our second suggestion is that the restoration of those communities be the primary focus of taxes on water transfers.

I think you may have been speaking with someone from the California Rural Legal Assistance, and I think Tom, who has been thinking about the idea of a rural enterprise zone fund, which would be part of your restoration effort and whose goal would be addressing the important economic issues of jobs and sustainable economic development for the Central Valley.

The third issue is that we have a history of working with farmers, with small scale farmers who live in various different areas of California, and we have observed that they are often very creative and very innovative in finding solutions to problems that they have on their farms. And we are convinced that the people who might be most capable of developing new approaches to water management, for example, already exist on family farms and on the boards of directors of water agencies in California. And so I think it would be actually self-defeating to not provide resources to the process of encouraging the innovation of those farmers and the people on those boards of directors.

So, I would suggest that your fund direct its proceeds from taxes on water transfers directly towards on farm research in water conservation and direct loans to innovative family farmers who are looking at new ways to manage their water resources. I think that that would be one of the most productive ways that you could use that money.

Finally the last area of amendment which I have outlined in the written testimony is that I believe in democracy, and I believe without the insight or direction from rural communities themselves funding decisions of the Restoration Board of Trustees will be misguided.

So, I urge that the board include members with a demonstrated commitment to the betterment of rural communities. This would mean I think an ability to represent the needs of farm workers, the unemployed and low income residents of the valley, because those are the communities that I am urging that you address some of your restoration effort towards, I think those communities should be represented.

So, thank you very much for the opportunity to speak for family farmers and other rural residents in support of this bill. With changes in the four areas cutlined in my written testimony I am sure that we will be able to fully support it.

[The prepared statement of Ms. Redmond follows:]

PREPARED STATEMENT OF JUDITH REDMOND, EXECUTIVE DIRECTOR, CALIFORNIA ACTION NETWORK

Thank you Senator Bradley for this opportunity to speak in support of the Central Valley Improvement Act. My name is Judith Redmond. I am a farmer in Yolo County. Our certified organic farm of 120 acres is the primary source of support for two families totalling four adults and three children. We employ between five and ten additional people year round. We grow a diversified line of fresh produce and 50 acres of nuts. My partners at the farm, many of our colleagues working in agriculture, and myself are dedicated to promoting the environmental and economic viability of sustainable agriculture. We hope that our children and grandchildren, and those of our neighbors will have the option to farm in the future. We are especially concerned about water supplies for agriculture, and the social and economic viability of California's rural communities.

Of the four farm partners, I am the only one who farms part-time. I am also the Executive Director of the California Action Network, a 14 year old statewide membership organization with chapters in Salinas, Fresno and Davis. The majority of our members live in agricultural areas, and many of them are farmers. CAN has a history of activism on water issues, having worked hard for the passage of several pieces of California legislation to protect groundwater and to promote research into sustainable agriculture. We have also been active in demanding implementation of Reclamation Law acreage limitations. Our members share a commitment to social justice in rural communities, the equitable distribution of rural resources, and the implementation of ecologically sound, family oriented agriculture.

Consistent with this history is our support for the environmental objectives of the Central Valley Project Improvement Act. CAN has worked diligently to protect environmental uses of water. My impression from discussions with our membership leads me to believe that this commitment to environmental uses of water does not stem from an interest in the recreational or potentially productive aspect of wetlands, rivers and streams, but from a much deeper understanding of the natural balance. This commitment is the result of many years spent working with biological systems and relying on them for a livelihood, as all farmers do. As an almond grower in Del Rey told me many years ago, "Water flowing down the river is not wasted." This is a lesson that some segments of California agriculture have yet to learn.

We supported several of the approaches outlined in this bill. The allocation of CVP water resources to fish and wildlife is long overdue. The allocation of funds raised from CVP water contractors to environmental restoration projects is long overdue. The implementation of water conservation plans is also long overdue in certain CVP districts.

With that in mind, I would like to confine the rest of my testimony to specific sections of the legislation that we urge be amended.

GROUNDWATER PROTECTIONS

Sections 5(a) and (b) of the bill would make it possible for individuals and agencies to buy and sell water. We believe that a complete deregulation of the water market is a serious mistake for both environmental and social reasons. Although we have many concerns about water marketing, I will mention only a few here.

First, many family farmers are concerned about the adverse effect that surface water sales could have on already depleted ground water supplies in California. Recent water deals in California, made possible in response to the drought have reflected the "sell and pump" approach in which a landowner sells surface water rights but then continues to grow crops using ground water, in effect profiting from the use of twice as much water as in the past. Jim Costa has introduced California legislation (AB 231) that would encourage individuals to do this and would classify this mining of the groundwater aquifer as a "beneficial use" of water.

Farmers who have their eye on the future, especially many of the third and fourth generation farmers who are members of CAN believe that this section of the bill should be amended to protect ground water aquifers. Annual overdraft in the San Joaquin Valley is approximately 1.3 million acre-feet per year in a "normal" year. Overdraft causes decline in water table levels and therefore increases the cost of pumping for everyone. Other problems associated with overdraft, include land subsidence and salt water intrusion into the aquifer in coastal areas. "Sell and pump" should not be legal.

BOARD OF TRUSTEES SHOULD INCLUDE REPRESENTATION FROM THE AFFECTED RURAL COMMUNITIES

Our second concern about water marketing springs from our knowledge about California's rural communities. Because this bill is going to have a significant effect on those communities, we urge that there be at least three members of the seven member Board of Trustees of the Central Valley Project Restoration Trust who have community credentials.

The special nature of rural culture and the importance of preserving it are recognized universally. I often invite my customers at the farmers market out to our farm because they express many frustrations with their life in the city and believe that a few days in the countryside would be rejuvenating. This conception of rural living is not entirely romantic. I know from experience that rural communities are safer. People are more likely to go out of their way for each other and help each other out in a pinch. People also know and recognize each other more often than they do in urban areas. The social cohesion that people in cities struggle hard to attain is more easily accessible to rural dwellers. Even urban residents agree that we will all benefit from the preservation of the rural lifestyle. Its demise would be a cultural loss and a reduction in options and opportunities for us all.

Obviously, environmental damage to the Central Valley is its primary focus, but this legislation overlooks the linkage between environmental degradation and community impoverishment. Because the benefits of the Central Valley Project have been concentrated since its inception among a relatively small number of landowners, the gulf between rich and poor is wide. This legislation, if passed without amendment, will most certainly further widen that gulf.

While there are various measures of community economic and social conditions, the proportion of residents supported by welfare, a measure used by the Census of Population stands out because of the unexpectedly high ranking of agricultural communities in our Central Valley.[1] Of the ten Standard Metropolitan Statistical Areas in the entire United States with the highest proportion of residents supported by welfare payments, six are in the Central Valley of California. They are, in order, with the percent of residents supported by welfare payments also indicated, Visalia (15.9%), Stockton (14.4%), Yuba City-Marysville (12.4%), Modesto (11.8%), and Redding (11.6%).[2] The remaining four areas in the top ten are Jersey City, Atlantic City and Vineland in New Jersey and New York City. Thus, California's most important agricultural area most resembles Eastern urban ghettos in terms of this measure of poverty.

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[1] The following discussion of community poverty levels in the Central Valley is borrowed from "Environmental Effects of Living and Working in Agricultural Areas of California; Social and Economic Factors," by Don Villarejo, California Institute for Rural Studies, June, 1990. A copy of this article is appended to this testimony.

Within California there are 61 cities or communities where at least 10% of the employed population works in agriculture.[3] Between 1979 and 1987, per capita income in the state grew by 59.1%. But in the 61 agricultural communities, the median rate of growth of per capita income was just 28.9%, 50% lower than for the state as a whole. As a consequence, agricultural communities lost ground over this period, with the ratio of per capita income in these communities to that of the state falling from 0.631 to 0.553. In these communities, the higher the fraction of people employed in agriculture, the larger the Hispanic population and the lower the median education level. The community with the highest share of employed persons working in agriculture is Huron (63%), where the Hispanic population accounts for 91% of the residents and the median educational level among those 25 or older is 5.9 years.

In light of poverty in the Central Valley, it is important to consider the social and community effects of the CVP Improvement Act. The transfer of water away from agricultural areas is a transfer of the key economic resource. Water transfers are sure to result in loss of jobs and loss of economic opportunity for rural residents, unless the value of the water returns to these areas. Although landowners with water rights will be directly compensated, the community will no longer receive economic benefit from that resource. The landowners would be free to spend their money in Florida, Monaco, or wherever. For these reasons, we urge that restoration of those communities should be the primary focus of taxes on water transfers and taxes on CVP water contractors.

With this focus in mind, we have a specific suggestion: Section 7(c) of the legislation describes the credentials of the seven members of the Board of Trustees of the Central Valley Project Restoration Trust. The only credentials cited are a knowledge of preservation and restoration of natural biological diversity. We urge that there be at least three members of this seven member Board who have "community credentials"—a demonstrated commitment to the betterment of rural communities and an ability to represent the needs of farmworkers, the unemployed, and low income rural residents.

As most California legislators are aware, the rate of growth in rural and agricultural areas of California is higher than for the rest of the state. In the 61 agricultural communities mentioned above, population increase amounted to 27.6%, nearly 50% higher than for the state as a whole[4] and much of the growth is in the Hispanic population. Within the 61 communities studied, 47% of the aggregate population was Hispanic, compared to 9.2% in nonagricultural communities. Thus, special attention to the needs of Hispanics in the Central Valley are in order.

FUNDS FOR COMMUNITY RESTORATION

We would like to suggest two areas of funding that should be emphasized with respect to proceeds from the Central Valley Restoration Fund and Trust.

We are firmly convinced that there is great potential for new approaches to water management in California agriculture and that the people most capable of developing those approaches are the Boards of Directors of water districts and the farmers themselves. Support for those innovators is crucial to ensure success of the water conservation plans and water conservation goals of this legislation.

We are in touch with farmers who have been thinking about water issues for a long time. Because these farmers depend on water for their livelihood, we believe that their insights should be given just credit, and that their efforts should be given institutional support.

California's research and extension institutions have paid absolutely no attention to issues of wise water management on farms. In fact, they have had committed none of the nearly unlimited public and private funds at their disposal to such an objective. The paradigm of agricultural research since WWII has been to increase agricultural yields using whatever inputs were necessary. Although we trust that many farmers and members of Boards of Directors of water agencies will respond with innovation and creativity to the necessity to conserve that will be mandated by this legislation, it is harsh and possibly self defeating to provide no institutional support whatsoever for that process.

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[2] *Metropolitan Area Fact Book*, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1984.

[3] Villarejo, Don, June, 1990. "Environmental Effects of Living and Working in Agricultural Areas of California; Social and Economic Factors."

[4] Ibid.

With this in mind, proceeds from the Restoration Trust and Fund should be directed towards on-farm University research, extension efforts and direct loans to innovative farmers to promote leadership in water management techniques. Because of the large capital investment required to make water management changes, special assistance will be needed for small-scale farmers. Many policy makers seem to equate water conservation with drip irrigation of crops. This reflects a gross oversimplification of the issues complexity and difficulties involved. Policy makers should not underestimate the ability of low interest loans in stimulating change.

Finally, as I have already emphasized, environmental and economic impoverishment are closely related. The grass-roots environmental movement has tried to call attention to this phenomenon with respect to toxics issues. When policy makers address environmental issues without addressing social issues as well, they tend to exacerbate the social problems, or for example, simply move the environmental problems to other areas.

The history of the development of irrigation in the Central Valley is simply another illustration of the linkage of environmental and community impoverishment. Thus, rather than a narrow environmental focus for the Central Valley Restoration Fund and Trust, it should be expanded to include the concept of a Rural Enterprise Zone Fund developed by Ralph Santiago Abascal, General Counsel for California Rural Legal Assistance (CRLA) and proposed in the 1985 CRLA Foundation publication, "Turning Off the Tap on Federal Water Subsidies, Vol. I, The Central Valley Project, the $3.5 Billion Give Away," pp. 13–19, 156–157. The objective of the Rural Community Betterment Fund would be to deal with the important economic issues of jobs and sustainable economic development in rural areas. Water is a crucial necessity for any type of rural development, and that is why CAN is, in general, not in favor of water transfers out of rural areas. However, if they occur, there should be a mechanism for ensuring the growth of local opportunities. I would urge you to contact Mr. Abascal for further details on his idea; also, "Avoiding Owens Valley Syndrome: Using Water Trades to promote Rural Economic Development," an article that elaborates on this approach is appended to my testimony.

Marty Strange, Program Director of the Center for Rural Affairs in Walthill, Nebraska has also been working on strategies for rural development. He believes that sustainable agriculture can be a strong foundation for viable rural communities. He argues that sustainable agriculture results in more net income staying on the farm and more farmers staying on the land, creating more demand for people-based businesses and enhancing community viability.[5] Research done by the Center for Rural Affairs has shown that rural communities have unusually high numbers of people that are self employed and whose small businesses have the potential to generate employment opportunities. The Rural Enterprise Zone Fund could thus be used to promote economic development in rural California including the promotion of sustainable agriculture.

In summary, CAN supports the goal of this bill but urges significant amendment. Thank you again for this opportunity to testify on its behalf. We urge you to consider the following ideas:

1. Protection of groundwater aquifers from the "sell and pump" approach encouraged by deregulation of the water market.
2. At least three members of the CVP Restoration Board of Trustees should have community credentials and a commitment to represent the low-income residents of the Central Valley who are most vulnerable if the water market is deregulated.
3. Proceeds from the Restoration Fund and Trust should be directed into research and extension that supports and promotes water conservation on small-scale farms.
4. Proceeds from the Restoration Fund and Trust should be directed to a Rural Community Betterment Fund.

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[5] Strange, Marry, Dec. 21, 1990. "Rural Economic Development and Sustainable Agriculture," Center for Rural Affairs, Walthill, Nebraska.

Senator **Bradley**. Thank you very much, Ms. Redmond, for your testimony. You have very interesting ideas.

Mr. Peltier, welcome to the subcommittee and it is your turn.

STATEMENT OF JASON PELTIER, MANAGER, CENTRAL VALLEY PROJECT WATER ASSOCIATION

Mr. **Peltier**. Thank you, sir.

Let me start by saying with a few changes we too can support your bill. We definitely support the broader objectives, we want to improve the CVP, we want to increase the efficiency, the flexibility, we want to resolve fish and wildlife problems, we want to improve the environment.

What makes me nervous is sitting here today, is I think a lot of people were saying those same things, but with different designs on how the world should look.

Your hearing comes at a time when we have been under enormous pressure and in attack over the last few years, we are a big slow moving target, and we are getting kind of used to taking the shots.

But, I hope that in the process of improving your bill starting from today that we can truly work together to do those things, and that in the purest consensus kind of an approach.

Your words just before lunch that there was not going to be a taking of water gave me great heart, because that will keep people at the table, it will keep them working together to solve problems. And it is only through that kind of a process I think that we can achieve success.

As we have come to recognize this notion that everybody has veto power, I think is so very true in California. It is not outright veto power, but it is the ability to frustrate delays, slow down obscure objectives and generally keep people frustrated. We can all do that, we are all worthy in that ring, and I guess we are also at a point of a lot of us being frustrated and tired of fighting.

To the extent that your bill can stimulate us and move us forward in the process of identifying solutions, even if it never becomes law, it has been a success.

I think two more points on the process. I think its clear that the Central Valley Project water customers are anxious to participate in the process and do our part to resolve problems. We are willing to commit to put water and money on the table and employ as much creative thought as we can to resolve problems.

I think Assemblyman Katz said it well when he said basically you can mobilize the politics of California to change the CVP. There is no doubt about that, 4 percent of our State is rural, and the lack of connection and understanding with rural California in the urban centers is appalling and I think often exploited by the people that want to radically change the CVP in a process other than you are pursuing here.

The question of assigning blame is as I have discussed in my written testimony, is one that has been very difficult for us. Certainly the CVP has caused problems as have all the activities of man.

If I could at this point maybe I will show you a motion of a picture that is worth a thousand words. That is a diagram of the water systems and rivers in the Central Valley. I am sorry it is not color-coded, but the original was. The Xerox did not pick it up very well.

But, it just demonstrates to you in a nut shell some of the complexity and the many, many, many interests that have been involved through our history to develop our water system.

Certainly we can sight figures that show only a small portion of the wetlands in California were lost after the time the CVP was begun. We can sight figures that show that only a small portion of the spawning habitat that has been lost in the State was lost after the time the CVP construction was begun.

But, I think we do not want to get into that debate because we all know that it is a never-ending debate where nobody will be satisfied and everybody will hold strong to their positions. We do not want to argue those things anymore we just want to get on with fixing them.

Relative to the notion of changing the purpose of the project a lot of discussion today has centered around the notion of mitigating for the CVP and that is a very difficult question related to the whole question of assigning blame.

There has been little discussion of the language in your bill relative to enhancing fish, wildlife and other environmental values. I do not know the extent to which the word enhance will change the project, but certainly the entire project, the total project could be devoted to enhancement of fish, wildlife and environmental values, and there would still be more to do to improve and enhance our environment in California. Quite away short of that is where we hope we see the CVP in the next 10 to 20 years.

We are not sure what the words, provide equitable treatment, are. I think I would certainly agree with Mr. Graff that the words are not as important as the deeds in the sense that to the extent the bill defines specific things, such as providing firm water for wetlands, providing physical structures to improve environmental conditions, to easing water transfer regulations and the like. The deeds are really the important thing, and that is really where the action is to be had as far as restoring environmental values.

I have been very concerned today about the rather loose talk of getting the CVP to serve all of California. The CVP is not big enough, it cannot serve all the needs of this State, in fact, it falls short of serving the water needs in the service area that Congress has identified.

I think further discussion of this notion that the CVP will serve the entire State really deserves much thought and consideration. Congress over the years has passed 13 separate authorizing measures building the CVP, and a lot of thought went into those, so any redirection from this point is most sensitive.

I would say to a question that you might ask, should CVP water go to Los Angeles? My answer would be, yes, under the right terms, under the right arrangements.

There is an excellent example of an exchange agreement being put together between Metropolitan Water District and Arvin Edison Water Storage District in Kern County. It is a win/win kind of an exchange. It is a kind of an urban investment in rural facilities so more water can be stored underground in our normal years or wet or better. And in exchange for giving up entirely their surface water deliveries and shipping that all to Southern California in a dry year. So, yes, there are examples, but they must be very well identified and reasonably constrained.

I guess my last point would be our urging to do the doable now, and do the immediate now as the things that we know that are out there to be fixed. Numerous of them were identified in the Sacramento River Restoration Program, such as the temperature control device at Shasta, fish passage at Red Bluff. Beyond that I think we have reasonably scooped out the wetland needs for water from the CVP. I think we can act on some of those and do them now, sooner rather than later. Sooner than getting into long drawn out battle over the bigger picture of where is the CVP going to go in the future, and let us get the achievable in place and moving. And that does not absolve us of the larger policy questions.

It is a shame to see well defined answers to problems waiting while we are debating the broader issues.

Thank you.

[The prepared statement of Mr. Peltier follows:]

PREPARED STATEMENT OF JASON PELTIER, MANAGER, CENTRAL VALLEY PROJECT WATER ASSOCIATION

Almost two years ago this Subcommittee took the first step in what we see as a positive process: to review the Bureau of Reclamation's role in what you characterized as California's water controversies. We view this hearing today as another step in an open process to reach political, economic, environmental and social consensus on legislation that will help restore the fish and wildlife resources in the Central Valley of California.

The Central Valley Project Water Association is supportive of the broadest objectives of S. 484. However, in addition to the specific concerns outlined below, we have two fundamental concerns with the measure. The first is a policy question. What is the appropriate role for the United States in dealing with issues of state water law and the rights of the state to manage its own water resources? This is an extremely complex question and the appropriate treatment of it is essential for your effort to be successful.

Second, while we wish to work with this committee to improve and perfect this legislation, we are gravely concerned that adequate time be permitted for full and open discussion of the measure with the affected parties. The entire water community of California will be affected by this measure and efforts to involve all parties must be undertaken.

S. 484 as drafted would fundamentally redirect the purposes and accomplishments of the largest water project in the world—California's Central Valley Project. Before such a step is taken, it is incumbent on the Congress to fully understand the impacts of this redirection on the economic and social fabric of rural California.

We do not believe it is the intent of Chairman Bradley to inflict economic damage on rural California. But as it is drafted today, S. 484 will result in great economic damage by increasing uncertainty, by taking water away from those who have historically put it to use, and by placing the burden for restoring the environment of the Central Valley solely on the customers of the CVP.

CONSENSUS—NOT CONFLICT

The customers of the Central Valley Project are anxious to do their share to resolve the water-related environmental problems we face in California. We are supportive of defined, achievable and equitable measures which will improve fish, wildlife and environmental values in our state.

It is our hope that by committing money, water and creative thought we can take great strides forward. In order to be successful, our efforts and the efforts of others must be fully coordinated and integrated. We cannot address problems in isolation.

As the CVP is an integrated part of our state water system, so too must efforts to resolve problems be integrated and cooperative.

The foundation of S. 484 rests on the notion that the mitigation responsibilities of the CVP will be identified by the Secretary of the interior. The question of assigning responsibility or blame for the problems we face today has been hotly debated for several decades and this debate has not produced a single benefit to the environment. We cannot agree whether it was the goldminers, pioneer farmers, flood control efforts, urbanization, exploitive fish harvests, or any of a dozen other factors that may have caused a particular problem.

The challenge is to fix problems; to restore fisheries, to enhance wetlands, to improve water management and to do all of these things with recognition of some simple facts of life. First, we have 30 million people and an important agricultural economy to protect; second, if solutions are not developed mutually with broad support, any number of tactics can be employed to slowdown or stop an effort; and third, that we can, with all of the constraints we face, positively make progress if all sides can work together. Just look at the Sacramento River Restoration Program—a product of a consensus effort after years of acrimonious debate and finger pointing conflict had left everyone frustrated. There are numerous cooperative, consensus oriented efforts now underway in California which are threatened by S. 484. To the extent this measure ignites old battles, and old conflicts we will move backwards. We know well how to do battle, but are weary of war and want now to make progress in resolving environmental and water management challenges.

CONTRACT LIMITATIONS

The limitation of one year contracts in S. 484 is extremely damaging to the farms and communities served by the project and we believe it is counter productive to the broad goals of the measure. Water districts will not be able to make capital improvements to increase the efficiency of their facilities without financing. Without a firm water supply, the ability to obtain credit is virtually non-existent. Without firm supplies, land values will drop, uncertainty will increase, risks will increase and harmful, negative economic consequences will reverberate through the already depressed rural sector of California. Simply look at the economic damage of cut-backs and uncertainty in this drought year and you get a good idea of the year-to-year impacts of this proposal.

Limiting contract terms is unnecessary because to the extent that mitigation responsibilities can be identified they are satisfied prior to making deliveries.

As I have previously stated, the only way to provide lasting solutions to these fish and wildlife questions is by developing consensus . . . by involving water customers on a voluntary basis. The contract limitation provision will defeat this objective. Living with the uncertainty of no firm project supplies will be intolerable. It will result in a great outpouring of anger and opposition. If we had a clearer understanding of why this provision is in the bill, we could then work together to find an alternative means of satisfying those objectives.

SALE OF 100,000 ACRE FEET

We strongly object to the proposal to sell 100,000 acre feet of CVP yield to the highest bidder. This notion violates the fundamental principles of sound water planning and would set a dangerous precedent. Certainly urban customers can pay more for water than rural customers, and simply allowing the most wealthy to buy water ignores the responsibility we all have to make water allocation decisions guided by broad public policy objectives. For example, we have significant unmet urban water needs within the CVP service area and some of these are small rural communities who would be unable to compete with large cities. Are the needs of rural communities of less importance simply because they enjoy less wealth and are less able to provide a higher standard of living for their citizens?

The CVP has roughly a million acre feet of unallocated yield. This water has not been committed for a variety of reasons, but it cannot come close to satisfying the existing requests of nearly 4 million acre feet. The 4 million acre feet of demands includes approximately 250,000 acre feet for wetlands, 500,000 acre feet of municipal demands and 500,000 acre feet for sale to the State Water Project to facilitate the Wheeling/Purchase Agreement identified in the Coordinated Operation Agreement Legislation of 1986. The limitation of future project water contracting and the proposal to sell 100,000 acre feet casts a cloud over the legitimate, historic needs of CVP customers and others to proceed with marketing the remaining yield of the CVP.

RESTORATION TRUST

We are supportive of the concept of a Restoration Trust put forward in S. 484. However, there is no apparent linkage between the notion of CVP mitigation and the very broad objectives of the trust. Extracting $30 million annually from CVP customers puts an unfair burden on the project. If such a trust is to be established, it must be funded by the broadest base of both those interests which have affected the environment of the Central Valley and those having an interest in its restoration. While we do not have a specific recommendation of how to accomplish this, we are anxious to explore the concept.

FISH AND WILDLIFE AS A PROJECT PURPOSE

We do not understand the objective and effect of the language which states the CVP will be operated to provide "equitable treatment" for fish and wildlife resources. To the extent this language is viewed as putting fish and wildlife purposes ahead of other project purposes; we must object. The Bureau of Reclamation currently has the almost impossible task of balancing competing and conflicting objectives. The project operators spend a majority of their time trying to improve environmental conditions affected by project operations. They have had great success in the past decade in improving operations and have never, to my knowledge, violated state-established instream flow requirements. Efforts to supply the needs of wetlands have gone far beyond the contractual requirements for such supplies.

Fish and wildlife purposes are clearly a de-facto project priority. We are supportive of further defining that purpose, but this is a complex question with enormous consequences.

CONCLUSION

I have spent most of my time discussing problems with S. 484 today. Attached you will find a more detailed critique of this measure.

We have not provided specific suggestions for improving the measure because we simply have not had the time to discuss and develop such suggestions. Understandably, drought management activities have been all-consuming over the period since S. 484 was introduced.

We will now begin work on a more complete analysis, attempt to bring together the broader community of interested parties and develop positive, constructive suggestions.

The participation of your staff in this process is essential as we move forward from today. If S. 484 is only the stimulus for discussion and compromise, it will be seen as a success. We view today as a starting point—a point from which we can begin to fashion a comprehensive measure which will redirect and improve the CVP as an asset to our state and nation.

Efforts to redefine and redirect the CVP will encounter many complications. People, communities and large segments of California's rural economy are dependent upon the CVP. These people cannot be ignored or abandoned.

We must expand the accomplishments of the project; we can and must improve environmental conditions in the Central Valley. To be successful in both of these endeavors we must all work together. We must build consensus and we must be sensitive to the interests and needs of all.

Thank you Mr. Chairman for your leadership and willingness to help.

Senator **Bradley**. Thank you very much, Mr. Peltier, for your comments.

Ms. Redmond, your suggestions that you had for changing the bill, as I look at your testimony, one of them is three members on the CVP Restoration Board of Trustees should have community credentials and commitment to represent low income residents of the Central Valley.

Could you expand on that? What do you mean?

Ms. **Redmond**. Well, as I was describing, we think that the restoration of the environment in the Central Valley cannot be viewed in isolation from the people who live there. And we have staff people who have worked in the Central Valley, and their experience there has shown them that there are people who live there who are engaged in community activities and who are concerned about the economic opportunities for farm workers, economic opportunities for people who do not have year round employment, people who have been affected by the structure of agriculture in that area. And so I think what I have in mind is rather than concentrate only on credentials of biology and natural resources, that you try to figure out a way of finding people who live in the Central Valley who can represent the need for increased economic opportunity for people in those communities if water, for example, is going to be transferred away, or if we are going to attempt to restore those communities in the same way that we are going to attempt to restore the environment.

Senator **Bradley**. Could you give me an example of where you think the interests of low income residents of the Central Valley need to be considered?

Ms. **Redmond**. Well, one of the staff people that I am thinking of used to be a farm worker. For example, when a catastrophe hit California in the form of an earthquake and smashed the bridges in the bay area, reeked great havoc in Santa Cruz. Everyone nationally knew about it, but right now there is a situation going on in Tulare County where there are people actually starving as a result of the closing down of the citrus processing industry. There are literally people starving and they are not getting assistance at all.

I think because rural communities in California are somehow invisible. We somehow do not recognize the fact that there is higher levels of poverty in those areas than there are in some of the urban ghettos of this country, higher levels than in your State, as a matter of fact, which has I think some of the higher levels that there are.

So, I think that we need to address that problem of invisibility.

Senator **Bradley**. So, are you saying that the Restoration Fund, Fish and Wildlife Restoration Fund should not spend money just on fish and wildlife?

Ms. **Redmond**. Very much so.

Senator **Bradley**. Or that money from a tax on the transfer of rights should not go just to——

Mr. **Redmond**. Absolutely. To go to economic development basically.

Senator **Bradley**. And you think that that is best done by having representation of low income people on a board, is that correct?

Ms. **Redmond**. Yes.

Senator **Bradley**. To consider the interests of residence of the Central Valley?

Ms. **Redmond**. Yes.

Senator **Bradley**. Is it your sense that low income residents would have a similar view or a similar need or a desire to have fish and wildlife maintained?

Ms. **Redmond**. That is a hard question to answer. I think that many of the small scale farmers that we work with do. I think that many of the low income people that we work with in other programs have much more immediate needs in mind.

Senator **Bradley**. Mr. Peltier, would you be in favor of low income representation on a board?

Mr. **Peltier**. I would certainly agree that as we have found this year in putting the water bank together that identifying and understanding and dealing with third party impacts of major water decisions in terms of water moving out of a area or whatever. They are very complex, there are no easy answers and the only way we are going to get those answers is by developing the broadest base possible for directing the preservation.

Senator **Bradley**. So, you would support her recommendation?

Mr. **Peltier**. Absolutely. Broad community input, and I would hope that there would also be some local government officials, some water management officials. To the extent that the fund is going to preserve and restore the valley, just like the legislation, it needs to be all encompassing and who is participating and who is being heard and making sure that everybody is understood.

Senator **Bradley**. The bill authorizes Federal grants to growers to implement water conversation measures.

Would you support that, Mr. Peltier?

Mr. **Peltier**. Yes. But, I would be reluctant to put great reliance on appropriations in that area. I would rather maybe in a sense be more confident with farmers relying on investments in development of new systems which might work better if there is a need for R&D work. I do not know that the private folks are not doing all the R&D that needs to be done on irrigation system improvement.

But, then let the economics of each farmer dictate what he can do. The reliance on a grant is kind of an artificial basis for making an investment, and it just makes me nervous. Nobody is going to turn away the money, the fact is that if the economics of putting a drip in cotton fields if it will work only with a grant what are you going to do next time when you have got to replace that system, or it wears out and breaks. What are you going to do when the grant system is gone?

Senator **Bradley**. So, you would oppose the idea of grants to farmers to make conservation investment?

Mr. **Peltier**. No, I said I would be reluctant to rely on them. The notion is fine, it truly would be helpful and it definitely takes away one of our arguments against the one year contract limits, because there would possibly be another source of funds to improve systems. But, I am hesitant to believe in it.

Senator **Bradley**. You will take it but you will not believe in it.

Would you support a cap on the annual financial responsibility for CVP water and power contractors for fish and wildlife mitigation?

Mr. **Peltier**. That is difficult. I would say I would not support a cap on the activities of the restoration trust. But, because who knows in what directions it will move and what problems it will identify to be solved.

Senator **Bradley**. I am talking about the source of funds, the cap.

Mr. **Peltier**. Our portion of funds into the restoration trust, that would help bring a comfort level. Exactly what that cap is, is of course $30 million, is shocking at this point to see that number, and at some lower level with——

Senator BRADLEY. Do you agree with an earlier witness who said that he thought that it should not just be out of water, but should be out of water and power?

Mr. PELTIER. I believe that if such a trust is to be in place everyone who effects the ecosystem in the Central Valley and who benefits from it should have a hand in fixing it.

Senator BRADLEY. But, who is going to contribute the money? Do you believe it should be water and power or only water?

Mr. PELTIER. Well, obviously there is an easy taxing ability on both water and power within the CVP.

Senator BRADLEY. Then there was a suggestion on small hydro as well.

Would you agree to that?

Mr. PELTIER. I guess the only other means of taxing the broader water community that anybody has found, and that appears in Congressman Miller's bill, it appears that we have got to give more thought to how we rope other people into paying.

Senator BRADLEY. And do you approve that part of the bill that has Californians making most all of the decisions on fish and wildlife mitigation, a seven-person board being Californians?

Mr. PELTIER. I think locally developed programs and locally decision making processes are essentially. Our priorities competing in the scheme of things, within NMFS and interior nationwide, it is very difficult. So, local prioritization is key.

Senator BRADLEY. The bill also puts CVP water and power contractors on the committee that would look at transferring the CVP to the State.

Do you support that?

Mr. PELTIER. Yes, sir. We have no problem looking into it, and thank you for considering us.

Senator BRADLEY. Ms. Boatmun, you are concerned about the increased costs from an additional reservoir project?

Ms. BOATMUN. The reservoir, the people who live within our water district, Senator, have assumed the responsibility of paying for that. It is the additional costs because we are solely dependent upon the CVP that those contracts may be increased, it is at what expense, and it is an unknown. We do not know what that would be and feel that in addition to taking on the responsibility of building a reservoir, maintaining it, et cetera, that it may become too expensive.

Senator BRADLEY. So you would be looking for help there?

Ms. BOATMUN. Yes.

Senator BRADLEY. Let me ask you, I noticed, Ms. Redmond, at one point you wanted to intervene.

Ms. REDMOND. I just wanted to say something about the grants to farmers. We of course would suggest that they be directed towards smaller scale growers.

Senator BRADLEY. Meaning anything that should be means tested?

Ms. REDMOND. Yes. For implementing new techniques and new water conservation.

Senator BRADLEY. Let me ask you one more question, Mr. Peltier. You know the Fish and Wildlife Restoration Fund is capped at $30 million, and $15 million is given back to the trust, and $15 million for the Department of the Interior.

Do you agree with that?

Mr. **Peltier**. I guess I really do not have a reaction to it. As the trust was developed and more people were involved I think that that could be perfected. I do have a problem with the linkage between CVP dollars going to the very broad objectives of the trust, and so if I have a concern that is where it lies with the trust.

Senator **Bradley**. Well, let me thank all three of you very much for your testimony. I think its been very helpful, and think there have been some interesting suggestions here.

Mr. **Peltier**. If I could, Mr. Chairman, put in also in the record an analysis of the bill prepared by Stuart Somach, a firm in Sacramento that works for us.

[The information referred to follows:]

McDonough, Holland & Allen,
Sacramento, CA, March 15, 1991.

Mr. Jason Peltier,
Manager, Central Valley Project Water Assn., 1715 Capitol Avenue, Sacramento, CA.

Re: Analysis: S. 484—Central Valley Project Improvement Act

Dear Jason: At your request I have reviewed the above-referenced legislation. Enclosed for your use is a Memorandum which summarizes my preliminary views on this matter. My analysis is fairly critical of major aspects of S. 484. There are, however, numerous features of the bill which hold promise and which should be explored further as we work toward legislation that will address the needs and concerns of all involved.

Very truly yours,

Stuart L. Somach, *Attorney.*

[Enclosure.]

MEMORANDUM

ANALYSIS: S. 484—CENTRAL VALLEY PROJECT IMPROVEMENT ACT

The bill was introduced on February 26, 1991 (legislative day February 6, 1991) by Mr. Bradley.

Section 1

The title of the Act, if enacted, will be the "Central Valley Project Improvement Act." The word "improvement" is not defined in the bill, but would focus upon fish and wildlife resources that have been or might in the future be affected by Central Valley Project ("CVP") operations. No direct "improvement" is contemplated within the legislation for the CVP itself or the Central Valley.

Section 2

This section establishes the purpose of the proposed legislation. The stated purpose of S. 484 is the promotion and expansion of authorized CVP purposes. The expanded purposes which are promoted in the bill deal with fish and wildlife mitigation and enhancement. These expanded purposes are promoted through limitations on the use of water for existing CVP agricultural and municipal and industrial ("M&I") purposes. Existing agricultural and M&I purposes (with minor exceptions) are limited (or eliminated) until the "expanded" purposes of the CVP are accomplished.

To the extent that I have any problems with Sections 1 and 2 (as opposed to the substantive provisions of other sections referenced in these sections), my objections revolve around the fact that the true thrust of the legislation is hidden by words and phrases such as "improvement" and "promote and expand authorized purposes." In fact, the thrust of the bill is to insure that no more agricultural or M&I water contracts (or renewal of existing contracts) will take place unless and until certain perceived problems with respect to fish and wildlife have been fully addressed. In my view, the legislation must be viewed in this manner. I believe a more straightforward statement of purpose should be provided.

Section 3

Section 3 provides definitions to seven terms. The terms "Central Valley Project", "repayment contract" and "water service contract" as well as the terms "Reclamation Laws" and "security' are fairly straightforward. The term "Refuge Water Supply Report" refers to the United States Bureau of Reclamation ("USBR") March 1985 "Report on Refuge Supply Investigations, Central Valley Hydrology Basin, California."

The term "federal environmental laws" is defined to include, but not be limited by, a number of specific Acts. Those Acts are:

1. Migratory Bird Treaty Act, 16 U.S.C. §§ 703-711;
2. Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq.;
3. Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et seq.;
4. Wild and Scenic Rivers Act, 16 U.S.C. § 1271 et seq.;
5. National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq.; and
6. Endangered Species Act, 16 U.S.C. § 1531 et seq.

Sections 4 and 6

Section 4(a) prohibits contracting for the sale or delivery of CVP water for any purpose other than for fish and wildlife purposes, with the following minor exceptions:

1. An exception to the Section 4 prohibition is provided within Section 4(b) for up to 100,000 acre feet ("af") of M&I water to be sold to the highest bidder. This water is to be sold in order to provide "seed money" for a fish and wildlife restoration fund established pursuant to Section 7 of the Act.

2. An exception is also provided to facilitate transfers of water, pursuant to Section 5(a) of the Act, so long as a 25% surcharge of all proceeds is deposited in the fish and wildlife restoration fund or 25% of the water to be transferred is dedicated to fish and wildlife needs.

The contracting prohibition is to stay in place until three statutory mandates are met:

First, the provisions of Sections 6 (b), (c), (d) and (e) of the Act must be satisfied. In order to understand these provisions, one must also understand the operative effect of Section 6(a).

1. Section 6(a) provides that the CVP is to be operated to "protect, restore and enhance" fish, wildlife and related habitat "affected by the project" and to provide "equitable treatment" for fish, wildlife, and related habitat with the other primary CVP purposes. This provision is so broad that the CVP would, in essence, be committed to nothing else but fish and wildlife and related habitat. The terms "protect, restore and enhance" obviously go far beyond mitigation for project impacts and impose an affirmative duty on the CVP to cure problems caused by other water users. Moreover, the term "affected by the project" is extremely broad. The conjunctive operation of the CVP and the State Water Project ("SWP") probably affects almost all fish and wildlife and related habitat from Shasta and Trinity counties south to at least San Luis Reservoir. In light of the fact that we have had a difficult time mitigating for the impacts of the CVP alone, the proposed condition appears impossible to meet.

In this context, the mandate to provide "equitable treatment" for fish and wildlife and related habitat with other primary purposes of the CVP is essentially meaningless. As noted above, it will be essentially impossible to protect, restore and enhance fish, wildlife and related habitat affected by the project. As a consequence, the Act precludes the Secretary from even addressing the other primary purposes of the CVP. Even without this practical limitation, the phrase "equitable treatment" is so nebulous as to be without true meaning.

2. Section 6(b) provides a framework for insuring water supplies for wetlands on National Wildlife refuges in the Central Valley, specified state wildlife management areas and the Grasslands Resource Conservation District. The supplies allocated by this subsection are consistent with tables within the USBR's Refuge Water Supply Report.

3. Section 6(c) requires the Secretary to develop, adopt and implement a program to mitigate fully and expeditiously damage suffered by anadromous fish populations on the Sacramento, San Joaquin and Trinity rivers and their tributaries as a result of CVP operations. This program is to be coordinated with efforts to "restore, protect or enhance anadromous fish populations." The Secretary is also to develop, adopt, and implement programs to comply with California Fish and Game Code section 5397. This Fish and Game Code section requires an owner of a dam to allow fish passage beyond a dam or to provide sufficient flows to support fish below a dam.

In my view, these mitigation protections are swallowed up by the more burdensome provision of Section 6(a). The Section 6(c) provisions, however, are more directive and, as a consequence, would need to be addressed first in any program instituted to fulfill the Section 6(a) mandate.

4. Section 6(d) requires the Secretary of Commerce to investigate and report on the effects of the CVP on anadromous fish populations and fisheries, communities, tribes, businesses and other interests and entities that have now or in the past had significant economic, social or cultural associations with those fishery resources. The report is to be submitted to select committees of the House and Senate within one year of the enactment of the Act. This provision appears odd to me in light of its obvious attempt to provide justification for the other provisions of the Act. Why study the appropriateness and importance of the mandated actions after you have ordered those actions to take place? A more logical investigation and report would be one that focuses upon the economic and social impacts of the mandated actions on local areas, the State of California, the nation and, indeed, world markets. This would include an analysis of the impacts associated with the limitations and the redistribution of water from agricultural and M&I uses to the protection, restoration and enhancement of fish, wildlife and related habitat.

5. Section 6(e) requires the Secretary to fulfill the United States trust obligations with respect to fisheries and waters of the Hoopa Valley Tribe and other Indian tribes and communities. The plan is to be submitted to the relevant House and Senate committees within two years of the enactment of the Act. In light of the amount of Trinity water previously committed to instream flows by Secretary Andrus and current demands made by the Tribe, one can assume that most of the water on the Trinity will be dedicated to instream uses.

This will have the effect of putting more pressure on existing supplies from other sources. The best example of this potential is the temperature related fish problems below Shasta Dam. Currently, Trinity River water is used to assist in dealing with this problem. A reallocation of Trinity River water to meet the Hoopa Valley Tribe's demands will leave less water available to address fishery needs on the Sacramento River. Shasta will then be used to address fishery temperature problems on the Sacramento River and in the Delta, thus further reducing the CVP's ability to meet the "other primary purposes for which the [CVP] is authorized to be operated."

Second, before the contracting prohibition is lifted, the current Bay-Delta process must be completed by the State Water Resources Control Board ("SWRCB"), and the Environmental Protection Agency ("EPA") must approve standards established within that process. This limitation makes absolutely no sense. The current Bay-Delta process provides only a single snap-shot of a process which is supposed to be on-going. The CVP will be obligated to meet standards imposed upon it in the instant hearings, as those standards may be modified from time to time. To prohibit contracting until the SWRCB has completed its current efforts holds CVP contractors hostage to a process in which they have little, if any, control. Moreover, doing so does not at all advance the purposes of the Act. A more logical approach would be to insure that once the SWRCB completes its current hearings, the CVP will be obligated to implement imposed standards pursuant to he legitimate orders of the SWRCB.

This limitation also requires the EPA to approve the SWRCB standards prior to the time that normal contracting can continue. Again, this makes no practical sense. Neither the USBR nor CVP contractors control the SWRCB or the EPA. The fact that the EPA may not approve the SWRCB's Bay-Delta standards should have no effect upon CVP contracting. There simply is no nexus between the two actions. This is particularly true in light of the fact that the CVP will be obligated to meet whatever standards are legitimately imposed.

Third, before the contracting prohibition is lifted, at least 120 days must have passed after the Secretary provides a report to the relevant House and Senate committees with respect to the CVP's obligations under the Bay-Delta plan established and approved by the SWRCB and the EPA and the impacts that these obligations will have on the CVP's operations, supplies and communities.

In addition to these provisions, Section 4(c) prohibits the Secretary from renewing any existing repayment or water service contract, other than fish and wildlife related contracts, for a period exceeding one year, until the requirement of Sections 6 (b), (c), (d) and (e) have been met. The Secretary, however, is allowed to renew these contracts for up to 20 years if 10% of the water under the contract is committed to fish and wildlife purposes for 10 years with an additional one percent added to this water tax for each year, through the 20-year period. Prior to entering into this contract renewal, the Secretary must have fully complied with all federal and state environmental laws.

The practical effect of this provision is, of course, the re-allocation of water from existing CVP uses to fish and wildlife protection. The 10–20% water tax that would allow the contract renewals is, in essence, a form of coercion. Water users dependent upon CVP supplies will have little choice but to enter into the 20-year contract to insure continued rights to water. The year-to-year contracting, as a practical matter, will provide no security to agricultural and M&I water users and would preclude needed financing for on-farm operations.

Section 4(d) requires the Secretary, within two years of the enactment of the Act, to prepare an EIS analysis of the cumulative impacts of the potential renewal of all existing CVP water contracts. In my view, there is no way that the Secretary can prepare this document within the mandated timeframe, if ever.

The net result of the provision of Sections 4 (a), (c) and (d), as well as Section 6, is to eliminate any water contracting for agricultural and M&I purposes and to shift available water supplies toward the protection, restoration and enhancement of fish, wildlife and habitat. Moreover, the Act takes existing committed water and forces a re-allocation of that water for those purposes.

Section 4(b)

Section 4(b) contains a water shortage provision alleged to be for the purpose of helping urban areas. In reality, the provision is a means to obtain money for a fish and wildlife restoration fund established in Section 7 of the Act. Section 4(b) operates by making 100,000 af of water available to the highest bidder.

While Congress is, of course, free to allocate water by whatever means it desires, it appears to me that selling water to the highest bidder may not be in the public's interest. Proceeding in this manner does not insure that water gets to where it is truly needed, and it also sets a very bad precedent. Moreover, I am not sure that the 100,000 af will really be enough to address the very real shortages that exist.

Section 5

Section 5(a) provides that all new, renewed or amended water service contracts will have a provision added to them which would allow a contracting district, subcontractor or water user within the district to transfer water to any other water user or water agency so long as 25% of the net proceeds resulting from the transfer are deposited in the fish and wildlife trust fund; or 25% of the water subject to the transfer be dedicated to fish and wildlife purposes. Section 5(b) provides that subcontractors or water users contracting under this provision can do so only if: (1) the costs to the contracting district do not increase as a result of the transfer; (2) the contracting party agrees to forego the use of CVP water throughout the term of the transfer; and (3) the transfer involved no more water than the amount consumptively used or irretrievably lost in its prior use.

I have no conceptual problem with voluntary water transfers. This bill, however, probably will not facilitate this end. The 25% monetary or water tax will, in my view, act as a disincentive to transfers. A 25% monetary tax will require the price of water to rise in order to encourage sales. The rising costs of water will again allow the highest bidder to prevail.

The alternate water tax, in my view, will also hinder transfers. A water user will either have to obtain more money per acre-foot for water sold or simply not sell water if he is to avoid losses due to the transfer. There may also be hidden water costs in the way of carriage water if a percentage of water is split-off from the bulk amount to be transferred.

Section 5(c) requires a contracting district to meter all existing groundwater pumps and surface water delivery systems within five years of the date of contract execution and requires that any new systems are equipped with meters as they come on line.

I can imagine, but am not certain, why meters are required. The Act should explain the reason. I also question the rationale behind metering groundwater in light of the federal government's repeated statements that groundwater is purely a matter of state law.

Section 5(d) requires the contracting district to demonstrate its authority to undertake acts to ensure that drainage within the district meets all state and federal water quality standards and to commit to a program to meet all applicable state and federal standards. Section 5(e) provides penalties in the way of contract termination if the district does not "demonstrate" its authority to control drainage and undertake acts to insure that drainage meets all state and federal standards.

I am unaware of any applicable federal water quality standards associated with agricultural drainage. Districts are already obligated to meet state-mandated standards with state enforcement controlling non-compliance. Moreover, I do not understand the rationale behind making a District "demonstrate its authority" to deal with drainage. The section appears to be an expansion of federal authority over drainage issues at the expense of state programs. The section also appears to be an attempt to deal with water quality issues outside of the provisions of the Clean Water Act.

Section 7

Section 7(a) establishes a fish and wildlife restoration fund (Central Valley Project Restoration Fund called the "Restoration Fund") into which all of the monies collected pursuant to Sections 4(b) and 5(a) are deposited, along with an operations and maintenance surcharge, found in Section 7(b), on all sales of project water and power sufficient to equal $30,000,000.

Section 7(c) provides that one-half of the money within the Restoration Fund is to be contributed to a Central Valley Project Restoration Trust ("Restoration Trust"). The remaining money, including funds collected pursuant to Section 4(c), will be used by the Secretary to implement the fish and wildlife restoration goals of the Act, as outlined in Sections 7(f) and 7(g) of the Act.

Section 7(d) lists criteria for the establishment of Restoration Trust, and Section 7(e) outlines how the Restoration Trust is to be operated.

I like the idea of the Restoration Trust. As a consequence, the criticisms I have focus upon some practical problems associated with its format and mandate. First, as noted elsewhere, the funding mechanism found at Sections 4(b) and 5(a), in my view, are defective. Moreover, the CVP cannot support an additional operations and maintenance surcharge of $30,000,000. A more realistic mechanism for funding must be developed. Funding should be through appropriations, more realistic contributions from contractors, as well as through private donations. Second, I am skeptical about whether the Restoration Trust can operate in tandem with the Secretary's efforts. Both enterprises are focused upon the same goals in the same areas. Conflict is inevitable and may defeat the purposes for establishing the Trust.

Section 7(f) directs how the Secretary is to utilize one-half of the Restoration funds. There are six enumerated areas for the Secretary to address as he proceeds with his work. Some of the enumerated areas, such as supporting and encouraging research, training and education in methods and technologies of ecosystem restoration, while understandable, will not directly further the purposes of the Act. The provisions of Section 7(g) express a preference for certain types of restoration efforts as opposed to others.

Section 7(h) precludes funding of the restoration work other than funding for the Restoration Trust until the Governor of California makes an "irrevocable" commitment to implement the recommendations found in a report prepared by the Resources Agency of the State of California entitled Upper Sacramento River Fisheries and Riparian Habitat Management Plan (January 1989). I am not sure how or if the Governor can make an "irrevocable" commitment to do anything. Moreover, I do not understand why the good work outlined within this section should be held up if the Governor does not agree to proceed pursuant to the recommendations found in the Report.

Section 8

Section 8 contains various miscellaneous provisions.

Section 8(a) authorizes the Secretary to promulgate regulations and enter into agreements.

Section 8(b) allows project power to be used for fish and wildlife purposes. This, of course, will reduce the amount of power available to existing CVP power customers.

Section 8(c) allows the Secretary to obtain water supplies from any source. I am not sure of the intent or practical purpose of this section.

Section 8(d) provides contracting authorization for the Secretary to enter into contracts for impoundment, storage, carriage and delivery of CVP water for any project purpose. I assume this provision is to provide flexibility for CVP operations, but, as a practical matter, I am not sure how it is to work.

Section 8(e) allows project contractors to use project facilities if that use does not conflict with project purposes. I have no idea what this provision is to be used for.

Section 8(f) promotes conservation of water through cost incentives. A project contractor can reduce payments in any given year by the amount of avoided O&M costs. I believe this is a good idea.

Section 8(g) provides for the establishment of a water conservation best management practices office which, in consultation with various agencies, is to develop criteria and standards for evaluating the adequacy of all water conservation plans developed by CVP contractors, including the Section 210 RRA plans. Conservation plans must include four enumerated criteria, and, once approved by the new office, must be implemented. Non-compliance with the conservation plans can result in strict sanctions being imposed against noncomplying entities.

Other than the additional bureaucratic agency created by this provision and the potential litigation associated with that agency's actions, I have no problem with the idea that conservation should be mandated.

Section 8(h) provides further incentives for irrigation contractors to execute contracts pursuant to Section 4(c) of the Act by requiring the Secretary to provide those contracts with financial assistance to implement cost-effective water conservation measures. This subsection also provides for assistance with the Subsection 7(g) provisions dealing with mandatory conservation.

Section 8(i) makes it clear that water storage facilities are not being authorized. The subsection, however, does not make it clear if water storage facilities are prohibited. Some clarification on this point would be helpful if it is determined that additional storage facilities are a reasonable means to meet the Act's goals.

Section 8(j) excludes contract amendments which take advantage of this Act from the requirements of RRA.

Section 8(k) requires the Secretary to submit another report to the relevant House and Senate committees on actions taken pursuant to the Act toward meeting the Act's purpose and the Secretary's suggestions for additional legislation.

Section 9

Section 9 is a citizen suit provision by which the CVP is turned over to the federal courts for administration. In my view, the nebulous nature of Sections 1 and 2, as well as the substantive provisions of Sections 4, 5, 6, 7 (especially 7(f) and 7(g)) and 8 will be the hot-bed of litigation which, in all candor, may never end. The nature of the legislation is simply too expansive to result in anything less. In addition to the expected APA review of every decision made by the Secretary, I would expect substantive litigation associated with the "Federal environmental laws" defined in Section 3(c). In short, litigation associated with the Secretary's alleged non-compliance with this Act will thrust the CVP into chaos for years to come. Ironically, while existing CVP customers suffer, the fish and wildlife resources which are at the heart of the legislation will be the true losers.

Section 10

Section 10 establishes a CVP Transfer Advisory Committee to prepare a report to Congress and the President on all issues associated with transfer of CVP facilities to the State of California. The section provides specific direction on the formation of the section as well as areas that the Committee is to cover.

I have no problem with this provision although I believe that the Committee's mandate should be broadened to include the investigation and reporting on transfer proposals in addition to a transfer to the State of California. Another option, for example, might be a transfer to CVP water and power customers and to the Restoration Trust. I also note that this section which deals with the transfer of CVP facilities to the State of California is inconsistent with the provisions of the rest of the Act which strengthen federal control on CVP operations.

Section 11

Section 11 provides for an authorization for the appropriation of funds necessary to carry out the provisions of the Act.

Senator **BRADLEY**. Yes. As a matter of fact I would welcome any submissions to this hearing as long as they are made in the next 3 minutes. I want to thank all of the witnesses for their testimony today, I think that this has given us a good range of views. There are a number of things that came out of here from my perspective that I had not thought about prior to the hearing, and I actually think that unlike some hearings that I have sat through, this one has actually generated some ideas and broadened the outlook of the subcommittee. I think it will be reflected in the course of this legislation.

Some of you obviously will be at a second hearing we will hold in California, some of you will not. For those of you who will be in attendance, we will see you then, for those of you who will not be, thank you for coming this time. The subcommittee stands adjourned.

[Whereupon, at 4:37 p.m., the hearing was recessed, subject to the call of the Chair.]

CENTRAL VALLEY PROJECT IMPROVEMENT ACT

WEDNESDAY, MAY 8, 1991

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:05 p.m. in room 366, Dirksen Senate Office Building, Hon. Bill Bradley, presiding.

OPENING STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM NEW JERSEY

Senator BRADLEY. The subcommittee will come to order. Welcome to the second of three hearings that the Subcommittee on Water and Power is conducting on S. 484, the Central Valley Project Improvement Act, which I co-sponsored with Senator Cranston.

My fundamental objective in sponsoring S. 484 is to eliminate or modify Federal policies and practices which have left the Central Valley Project strikingly out of step with California water law and policy. I hope to begin fixing at least some of the problems which those policies and practices have created.

At the subcommittee's first hearing on this bill, almost 2 months ago in Los Angeles, we heard considerable support for S. 484, along with some criticism. Senator Cranston and I are grateful for the support, and appreciate constructive criticism that helps us develop the best possible legislation to meet California's water needs.

I'd like to take a moment now to respond to some of the criticisms that have helped us focus discussion, and I hope that these criticisms and comments will help us focus discussion for the remainder of this hearing and help us move the bill along.

S. 484 is intended to reduce existing Federal meddling in California's affairs, not increase it. Let us look at some examples.

First, California law encourages voluntary water right transfers subject, in most cases, to certain restrictions the State Water Resource Control board may chose to impose. Some senior California water rights may be transferred even without State board approval. In other words, State law treats water rights like almost any other private property right, they can be used freely by the owner, subject to the police power of the State to protect the public interest.

By contrast, the Federal Government has laid claim to 20 percent of California's water, parceled it out to several thousand individual land holders, and then barred those individuals from using that water as other California water users can use theirs. This is a clear, existing case of the Federal Government having imposed its will and its priorities on an enormous block of California's water.

A second example: California law allows water right holders to save or bank a portion of their water without fear of losing their underlying right to that banked or conserved water. By contrast, CVP water users are barred from banking their water. The State policy is use water efficiently. The Federal policy is use water or lose it.

A third example, State water law recognized a broad range of water uses as permissible, including fish and wildlife and recreation. The State's own water project is authorized to be operated for these purposes. By contrast, the Secretary of the Interior claims that he is unable to run the CVP for the full range of public purposes recognized as beneficial under State law, including fish and wildlife and recreation.

What does the Federal Government have against California's fish and wildlife or recreation industry? Interesting question. The result of these three Federal policies and practices is that the CVP functions as a State within a State, like some sort of Federal preserve insulated against State law and environmental accountability.

With these examples in mind, I ask the bill's critics whether it is indeed unwarranted Federal intrusion into State affairs, to propose that State laws, instead of Federal rules, should govern the transferability of CVP water.

Is it unwarranted Federal intrusion into State affairs to suggest that the CVP should be operated for purposes recognized as beneficial under State law?

Is it unwarranted Federal intrusion into State affairs to suggest that the CVP should be held to the same standards of environmental accountability as the State's own water projects?

Is it unwarranted Federal intrusion into State affairs to suggest as, S. 484 does, that the CVP should, in time, be turned over to the State?

I think the answer to each of these questions is clearly "no."

While I do not accept the notion that S. 484 represents improper Federal intervention into California's affairs, I am grateful to those who raised the question of State's rights. In thinking about that criticism, it occurred to me that S. 484 could and probably should be amended to grant California additional authorities to shape administration of the Central Valley Project.

For example, if we are truly concerned about State's rights, should S. 484 not be amended to give California the clear victory it sought in the *California* v. *United States* litigation back in the late 1970's. Should we not expressly permit California to impose whatever conditions it sees fit on water rights held by the Bureau for the CVP, subject, perhaps, to the Secretary's right to collect repayment revenues from project contractors? I am prepared to considered this possibility seriously.

Similarly, S. 484 would expand the CVP's authorized purposes to include fish and wildlife. Should we not go further and authorize the CVP to operated for any purpose recognized as beneficial under California law? I am prepared to consider this seriously, too.

I would like to think that the California Senate delegation would join me in offering amendments to this effect.

When the subcommittee met in Los Angeles, we heard some other areas of criticism. Let me offer some ideas to what we heard in California and in response.

First, present CVP contractors urged us not to mandate any reallocation of CVP water. I can understand their desire to maintain the status quo, but I am convinced that neither Federal nor State environmental laws will permit us to continue to use CVP water the way we have been. Too many fish are dying, too many wet lands are drying up, and drinking water quality is declining much too far to allow the status quo to continue. Clearly, some water now being used for other purposes, is going to go have to go back to the environment very soon.

That having been said, I am quite willing to consider means to increase the water supply of the CVP in order to meet environmental, and perhaps, other needs. I am particularly interested in measures which would make use of undeveloped ground water, expand conjunctive use of ground and surface supplies, and permit Federal participation in off-stream surface storage facilities. I am also interested in voluntary agreements with private water rights holders under which water would be made available for fish and wildlife. These steps could reduce the need for long-term reallocations.

Several witnesses in Los Angeles pointed out correctly that the CVP is not the only source of environmental damage in the Central Valley. Good point. S. 484 does not ask the CVP beneficiaries to fix anything more than the harm caused by the project itself.

Nevertheless, I agree that once the CVP begins to deal with the damage it has caused, others at fault should be asked to pitch in and do their part at the same time. In this regard, I'm willing to consider measures whereby other federally authorized activities in the Central Valley, including hydroelectric power generation, could be held accountable for their fair share of the Valley's fish and wildlife problems.

Finally, we heard in Los Angeles several witnesses complain that allowing CVP water to be transferred under California law, would risk damaging Central Valley communities and economies. S. 484 would permit only such transfers as the State sees fit to allow, but would tax them so as to aid California's fish and wildlife restoration efforts. Nonetheless, I am deeply concerned about the families and workers in the Central Valley who are not responsible for damaging fish and wildlife, and I would not want to see them suffer as the families of the Pacific Northwest have suffered as a result of the damage done by logging to endangered species in that region. And we should help those families adjust if changes are made.

I am willing to take another look at this issue to see whether something can be done for the local interest in those area from which water might be transferred. I have to note, however, that the primary responsibility for regulating water transfers should lie with California, not the Federal Government. If the Bureau of Reclamation marched into Montana or New Mexico or New Jersey, and started telling people who they could transfer water to and on what terms, I suspect that Montana, New Mexico, and New Jersey would take offense.

In closing, let us be clear on one basic fact. S. 484 offers California the chance to get free of a Federal bureaucracy which has imposed its own policies and priorities on one-fifth of the State's water supply. Moreover, its a chance to resolve serious environmental problems and has set the stage for resolution of California's pressing long-term water needs.

[A prepared statement from Senator Hatfield follows:]

PREPARED STATEMENT OF HON. MARK O. HATFIELD, U.S. SENATOR FROM OREGON

Mr. Chairman, I want to take this opportunity to thank you for scheduling today's hearing on your legislation relating to the Central Valley Project. There is no question that the prolonged drought in California and the other western states has exacerbated an already tense situation, and I applaud your efforts to explore possibilities to improve the operation of this project—a project which is critical to the health of region's southern neighbor.

My interest in this issue stems from both a national and a provincial perspective. First, the variety of issues and problems associated with California's Central Valley Project is representative of the types of water policy issues facing every region of this country. Policies regarding water delivery, conservation, pricing, marketing, state water rights, and other matters are of national significance, and should be discussed and debated in the broadest possible forum.

As many of my Senate colleagues know, I have long been concerned that the Nation does not have a consolidated, consistent and coordinated national water policy. Under current direction, decisions made by one state, region, or Federal agency are often made in a vacuum without consideration of the potential impacts on other areas and jurisdictions. This is not wise public policy. The time has come for Congress to examine the need to implement a national water policy which will provide the balance necessary to wisely manage what is, without question, our most important natural resource. Accordingly, I intend to introduce legislation in the near future that will begin to address this serious policy void.

I also am taking a keen interest in the Central Valley legislation due to the Project's direct impacts on the state of Oregon. The CVP is the greatest source of harm to Trinity, Sacramento, and San Joaquin river salmon stocks. These fish migrate northward off the California and Oregon coasts, and just a few years ago made up a significant portion of the southern Oregon commercial and sport fishery. The present collapse of these stocks is hurting Oregon's fishermen. This year's salmon season may be the shortest ever.

Oregon's salmon industry should not have to suffer because of the mismanagement of a Federal water project in California. My state and the Federal agencies operating in the Columbia River Basin are working hard to rebuild our salmon stocks. We are committing hundreds of millions of dollars and millions of acre feet of water to the job. We should get on with similar efforts in California, too.

The same concerns apply to migratory waterfowl. California shares the Pacific Flyway with Alaska, Canada, Washington, Oregon, Idaho, Nevada, and other states. To the degree that our states invest in protecting waterfowl habitat, our investment is threatened by habitat degradation in the Central Valley. Remember, in winter, more than half of the Flyway's ducks and geese rely on Central Valley refuges and habitat. An entire regional ecosystem may depend on how the CVP is managed.

It is not just Oregon's salmon industry or waterfowl which feel the effects of problems in the CVP. Oregon agriculture and electric power users feel it, too.

Because of state environmental laws and the fish and wildlife restoration programs under the Northwest Power Planning Act, Oregon and other Northwest growers are paying higher prices for water and power. They are being held to increasingly stringent environmental standards. Oregon's growers, like growers elsewhere in the Reclamation program, produce many of the same crops grown in the CVP and try to sell their product in the same markets. If our irrigators are asked to bear their fair share of the costs of environmental protection, and CVP growers are not, our growers suffer a significant competitive disadvantage.

Similarly, Oregon and other Northwest power users are paying more for Federal power because of the region's commitment to remedy the environmental effects of Federal water development. Other fishery restoration efforts are underway on the Colorado. If power from Grand Coulee or Flaming Gorge Dam incorporates the cost of fishery restoration, and power from Shasta Dam does not, our utilities may lose markets.

Finally, every Member from every western state has to bear one fundamental fact in mind: to the extent that it is unable to use its own water to meet growing urban water needs, California will try to take its water from somewhere else. Somewhere like Oregon. Somewhere like Wyoming. Somewhere like Idaho. Somewhere like Utah. I think that the West has a clear stake in doing what is needed to make sure that Federal water projects in California are fully able to meet the state's growing needs.

Accordingly, I intend to watch the progress of S. 484 with great interest.

Senator **Bradley**. I would hope that the witnesses today could address some of the issues that I tried to raise in this statement, and be as specific and as explicit as possible. The purpose of the hearing today is to elicit views so that we can make this bill a better bill. But the direction is one that I think is clear.

Senator Burns.

STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Senator **Burns**. Thank you, Mr. Chairman. I appreciate the opportunity of sitting in and your calling this hearing. I guess all of us will keep our remarks as short as possible because of the line of witnesses that we are going to hear from today, and I think they will raise many questions, and there will probably be a few written questions as we go on and hear the merits of this bill.

While the merits of the proposed legislation is laudable, I do have several concerns about the approach. Since this is a State problem, should not the committee to wait for the State of California to formulate a plan for this project, given the conjunctive use of State water project and the Central Valley Project. There has been a local process undertaken on the Upper Sacramento, and Senator Seymour has introduced legislation that would implement that process.

In addition, I have concern over the idea of the Federal Government auctioning off water to the highest bidder. I have some problems with that. Also, I have some concerns over the tax which the proposed legislation places on contract renewals and transfers.

And, not least, I have a concern over the impact of this legislation on the rural economy of California and the continued availability of reasonably priced, wholesome food. Central California grows a substantial portion of this country's fruits and vegetables at a reasonable price. $5 lettuce and $10 carrots are not what the consumers want to pay for fresh vegetables.

And I agree that there is probably need for more flexibility in the operation of the CVP. And I would far prefer to see the process which leaves the State of California in charge of its water.

Senator Seymour's legislation is a good start in that direction, and we will probably have some questions as the day goes on. But that is my opening statement, Mr. Chairman. I thank you very much for holding this hearing and allowing me to submit this statement.

Senator **Bradley**. Thank you very much, Senator Burns.

Senator Seymour.

STATEMENT OF HON. JOHN SEYMOUR, U.S. SENATOR FROM CALIFORNIA

Senator Seymour. Thank you, Mr. Chairman. And let me add my thanks to my distinguished colleague, Senator Burns, in thanking you for this hearing and thanking you for the initial hearing that you held in Los Angeles and one more hearing that should occur later this month. I appreciate your sensitivity to California's needs. I would await the comments of the senior Senator from California with us, Senator Cranston.

Mr. Chairman, one of the stated objectives of this bill is to right the wrongs brought about by the Central Valley Project. And I believe it may be helpful to recognize and acknowledge that much of the environmental damage which occurred in this region took place long before the development of the CVP. In fact, the CVP has done much to arrest the rapid environmental degradation brought about by the overdraft of ground water. This overdraft of ground water, and not the CVP, is what dried up much of the Valley's wetlands, and damaged habitat in the region.

And while the goals and objectives of your bill, Mr. Chairman, may appear worthwhile, I caution and remind those here that the bill is not entitled, "Senate Goals and Objectives." The bill is S. 484. At issue is the impact this bill would have upon the CVP and the people served by it.

I have some very real concerns with this bill because I think it will excite and ignite another water war in California and that tearing up the contractual water rights steeped in California history and redistributing the remaining pieces will only ensure a decade of litigation, and not one more drop of water for fish and wildlife. Let me highlight just a few of my concerns.

First, section 4 of the bill places limitations on contracting for the unallocated yield of the Project. It would specifically prohibit the Secretary from entering into any contract or other agreement to sell or deliver water on any basis or for any purpose other than fish and wildlife until such time as six conditions are met.

Now, one of those conditions requires approval by the Administrator of the EPA over the State Water Board's decisions concerning the Bay Delta water quality standards, and how to implement them. Now, that particular provision does not sound to me like we are moving the Federal Government out of this and permitting more flexibility on behalf of the State. I personally think it is absurd that the EPA would have veto authority over State process. Under current law, there is no requirement for the EPA to approve the Board's decision, much less veto it, and that the decision would have to comply with any applicable Federal law, whether administered by EPA or not.

This provision, then, gives EPA a new and independent veto over any decision by that board, even if that decision is approved by the courts.

I am also concerned with the very intent of this bill to redirect the CVP's water resources for fish and wildlife purposes above and beyond and as a higher priority than people, for flood protection. And as you indicated, Senator Burns, a priority over the bread basket of our nation. This not only preserves or serves as a dangerous precedent for other Federal water projects, but will also interfere with the CVP's ability to be operated in accordance with the Coordinated Operating Agreement (COA).

The COA requires the Secretary of the Interior to comply with State standards, except where such standards would conflict with congressionally mandated directives for the CVP. This bill would impose new directives on the use of CVP water. As a result, the Central Valley Project would be required to meet all other fish and wildlife uses, even before, for example, meeting the Delta standards.

When the Supreme Court handed down the Pelton Dam decision in 1955, another blow to State's jurisdiction over water resources, Justice Douglas filed a strong dissent, which supported State, not Federal decisions over water allocation.

Justice Douglas stated, "The reason is that the role adopted by the court profoundly affects the economy of many States, 10 of whom are here in protest. In the West, the United States owns a vast amount of land, in some States, over 50 percent of the land. If by mere executive action, the Federal lands may be reserved, and all the water rights appurtenant to them returned to the United States, vast dislocation in the economies of the western States may follow. . . . Federal officials have long sought that authority. It has been consistently denied them." I personally believe that we should deny them again.

Justice Douglas' reference to the Federal Government is a requirement to the reclamation laws that the Federal Government must obtain water rights from the state, and comply with State water law. This bill does just as Justice Douglas feared, having obtained water rights under State law for the CVP, the Federal Government would then preempt state law to use the water for its own purpose to satisfy the needs of a particular constituency, which ever it might favor at the moment.

I could go on and on and recite a litany of problems such as these, however, I want to turn my attention to the most serious problem of the bill, and that is its impact upon the rural communities and the people dependent upon CVP water.

The limitations on new contracting and the taking of water in exchange for the reliability of long-term contracts assume much. Proponents of this bill maintain that this trade-off is necessary as an incentive to conserve water.

The fact remains, however, that in order to receive a 20-year contract, which is one-half of the traditional 40-year water contract, users must give up, relinquish, 20 percent of their overall water supply. Now, the fact that agricultural producers and municipal users in the west have, and are continuing to implement state-of-the-art water conservation measures is not considered at all.

The fault of this provision is the simple assumption that CVP water users are not only wasteful, but are able to relinquish at the same time 20 percent of their precious supply. This is not an incentive for conservation, but would rather impose unnecessary hardship on the Central Valley region, already severely burdened by drought and the December 1990 freeze.

We have witnesses here today who will address this and many other problems within this bill firsthand. Mr. Chairman, I look forward to their comments and testimony. Thank you.

Senator **Bradley**. Thank you very much, Senator Seymour. We are very please to have as our first witness, the senior Senator from California, Senator Cranston, who is a co-sponsor of this piece of legislation.

STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM CALIFORNIA

Senator **Cranston**. Thank you very much, Mr. Chairman. I am very pleased to have this opportunity to appear before the Subcommittee on Water and Power to testify in support of the legislation you are sponsoring, S. 484, the Central Valley Project Improvement Act.

I am very pleased to be a co-sponsor of your bill. I am delighted that Senator Burns is present, and my colleague, Senator Seymour, is here, to work together on this very important general issue. I know we have differences, but I trust we can work them out in the course of time as we will on many matters.

The Central Valley Project Improvement Act, I believe, is of tremendous importance to the future of the Federal water program in the State of California. I am deeply grateful for the interest that you have shown, Mr. Chairman, in the State's water situation and for holding this hearing today.

With California coping now with a fifth straight year of drought, it is more critical than ever that we make fundamental changes in the way we allocate our scarce water supplies among agriculture, urban fish and wildlife, and other interests.

S. 484 not only seeks to restore fish and wildlife and the environment which have been adversely impacted by Federal water development, but also provides important new water management authorities to encourage conservation and assist in times of water shortages.

As you know, Mr. Chairman, the Central Valley Project is the largest Western water project, with 17 dams and reservoirs, over 600 miles of canal and aqueducts, 4 pumping plants, 7 power plants. The project serves approximately 3 million acres, almost one-third of all land served by the Bureau of Reclamation, and some of the most productive farmland in the nation, and indeed, in the world. Over the years, the Central Valley Project has significantly benefited the development of California providing water supplies, hydroelectric power, flood control, recreation, and billions of dollars of economic activity annually.

Unfortunately, the Central Valley Project also has caused serious environmental damage to fish and wildlife. In fostering agricultural production, the project has contributed to the reduction of waterfowl habitat in the Central Valley by over 92 percent. Riparian wetlands, which provide critical habitat for a variety of species, also have declined significantly to less than 5 percent of the original acreage. It is estimated that the Central Valley Project has caused the loss of 100,000 acres of these wetlands. Through the construction of dams, the CVP also has contributed to the loss of 5,700 miles of salmon-spawning habitat in California rivers. And of course this has very significant economic impact of its own.

Water releases from dams are often insufficient to meet minimum fishery needs. And in the case of Shasta Dam, the water temperature is too warm for successful salmon spawning. Additionally, CVP pumps are contributing to the decline of striped bass, steelhead, and salmon populations. In 1989, the U.S. Fish and Wildlife Service listed the winter run chinook salmon on the Sacramento River as a threatened species. Other species are being considered for listing.

In spite of these losses, California's Central Valley still retains valuable fish and wildlife resources. However, current drought conditions have placed these remaining resources in jeopardy. Wildlife refuges, for example, received CVP water only after agricultural, municipal, and industrial needs are met.

It is time for change. The drought has highlighted the fact that fundamental long-term reforms must be made. We need to anticipate the State's future water needs so that sensible policies will be in place the next time we have a drought. Incredibly, 2,000 people move into California every day. That means California's population is growing by over 500,000 people each year. In fact, California has added over 3.5 million people to its population since the beginning of the drought. It is time the Central Valley Project recognized broader, urban needs.

I realize the mitigation of the adverse impacts wrought by the CVP and any reallocation of our scarce water resources is going to involve some shifts in water use. However, fish and wildlife and recreation have taken a back seat too long while the Central Valley Project has served a limited clientele. With growing water shortages in California, we need to expand the project's benefits. In the process, I do want to see that the changes are equitable. We need to accommodate all interests, agriculture, urban, and the environment. I hope that in the course of the hearings this subcommittee is holding, agricultural water users will identify any problems they see in the legislation so we can undertake to accommodate their concerns.

Senator Seymour has outlined some of those in his opening statement, and I look forward in working with him and trying to find ways to resolve whatever difference we have.

If there are better means of addressing the CVP's impacts on fish and wildlife and the environment, I am ready to consider them. But it is critical that fish and wildlife finally be given equal consideration.

S. 484 requires just that. It prohibits new irrigation water contracts until the California State Water Resources Control Board concludes its current review of San Francisco Bay Delta water quality requirements, and until the fish and wildlife objectives of the bill are implemented. The bill directs the Secretary of the Interior that the CVP be operated to restore and enhance fish, wildlife, and related habitats affected by the project, and to provide equitable treatment for fish and wildlife with other project purposes.

I support the requirement that the Secretary of the Interior deliver sufficient firm water supplies to the wildlife refugees in the Central Valley of California. I support the requirement that the

Secretary of the Interior develop the program to mitigate fully the damage to fish populations caused by the CVP. I also support the requirement that the Secretary of the Interior develop a plan to develop a plan to fulfill the United States trust obligations with respect to the fisheries of the Hoopa Valley Tribe.

Additionally, I believe it is time that we actively encourage water conservation in agriculture. Freeing up water for fish and wildlife and municipal and industrial use. S. 484 contains a number of provisions to achieve this fundamental objective, including water banking, water marketing, metering of ground water, and longer contract renewals for those who conserve.

We must look for environmentally sound ways to increase available water supplies and conservation is clearly a means to accomplish this objective.

Finally, I believe that those who have long benefited from the project, the CVP contractors, should contribute funds to help pay the costs of restoring the environment. At the same time, the costs of fulfilling the goals of the legislation must be shared so the burden does not fall unfairly on any one entity, any one group of people.

S. 484 strives to provide certainty regarding the CVP contractors' share by capping those costs at $30 million annually.

In addition to agriculture water supply, and important project purpose is hydroelectric power generation. We need to keep in mind the effects of the bill, not only on growers, but also on power customers of the project. I am eager to hear what power users say about the legislation, as well.

In closing, Mr. Chairman, let me stress that we need a balanced water program. We need a comprehensive, not a piecemeal approach. I firmly believe that S. 484 establishes a process to achieve this goal. I look forward to working with you, again, also, with my colleague, Senator Seymour, and other members of the committee, in refining this legislation and moving it forward. Again, I thank you for holding this hearing and for giving this opportunity to testify.

Senator BRADLEY. Senator Cranston, thank you very much for your testimony and particularly for your sentiments that you want to work to try to solve whatever problems are out there. And that is certainly my intention and I appreciate very much your testimony.

Senator CRANSTON. Thank you, very, very much.

Senator BRADLEY. Senator Seymour, do you have anything?

Senator SEYMOUR. No. Thank you.

Senator BRADLEY. If that is the case, we will just move on. As our next witnesses, we have two Members of Congress here. I assume that they want to testify. Congressmen Dooley and Condit. Welcome to the subcommittee. The floor is yours, if you will identify yourself.

STATEMENT OF HON. GARY A. CONDIT, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. CONDIT. Thank you, Mr. Chairman. I am Congressman Gary Condit, representing the 15th Congressional District in the San

Joaquin Valley, and I thank you very much for holding this hearing on S. 484. And we appreciate the opportunity to speak before the committee.

I do have a written testimony that I would like to submit for the record, and with your permission I would like to sort of paraphrase my concerns with the bill. And I think you have heard some of them already, so I will try to shorten it up for you.

Senator BRADLEY. Your testimony will be submitted to the record, and the committee would appreciate you summarizing your views and you are welcome to do so.

Mr. CONDIT. Thank you. I have some serious concerns about this bill. It does not recognize the existing efforts to protect fish and wildlife. The CV, in its effort to recognize existing efforts to protect fish and wildlife, the CVP operation must have been altered to optimize condition of fisheries. It also does not recognize that much of the damage to the river was done before the CVP was operational. It does not recognize that other industries, not just agriculture alone have contributed to the diminishing demise of the fish population.

The bill places the entire financial burden of the rehabilitation of the CVP water on the CVP water users. The bill would result in immediate and drastic changes in the delivery of water throughout the CVP, threatening the economies of numerous rural communities that rely on agriculture as the main industrial base.

The bill places and perils secure water sources by severely limiting the renewal of long-term contracts. Farmers cannot operate without knowing if water will be available from year to year and municipal water users need to be able to meet their demands as well. The Central Valley should follow the model used to restore the Sacramento River. A coalition of environmentalists, water users, and State and local and Federal officials, this method was also used in the restoration of Trinity River. Efforts are underway to restore the San Joaquin River. You requested funding for the San Joaquin River's main stream and tributaries. The objective is to develop solutions to the water supply, water quality, flood control, fisheries, wildlife habitats, and recreation needs.

Mr. Chairman, I would like very much to work with committee, with Senator Seymour, to develop a bill that meets the goals of improving fisheries and wildlife habitat while not causing unnecessary and devastating economic damage to the Central Valley.

As your bill has proposed, it would damage the farming industry in the Central Valley. It would put hundreds and hundreds of people out of work—the very people that we are trying to focus on and help in the State of California and this country. And where we would like to be helpful and think the thing through, we think that there needs to be some changes that I have outlined in detail a little more in the written statement. And I appreciate the opportunity to be here today to submit them to you and answer any questions that you have.

I have one additional request. Congressman Bill Thomas from Bakersfield asked me if I could submit his statement for the record, and if you would allow me to do that, I would like to do that on his behalf.

[The prepared statements of Congressmen Condit and Thomas follow:]

PREPARED STATEMENT OF HON. GARY A. CONDIT, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. Chairman, thank you for holding this hearing today to review your legislation, S. 484, the Central Valley Project Improvements Act. While I share your concern over the loss of fish and wildlife habitat in California, I have some very serious reservations over the approach taken in your bill.

First, because of the existing fish and wildlife problems in California's Central Valley, restoration of fish and wildlife are already authorized project purposes of the Project. The Central Valley Project has delivered millions of acre-feet of project water to the wetlands of the Central Valley. In addition, Central Valley Project operations have been altered dramatically over the last few years to optimize conditions for fisheries.

Unfortunately, this bill fails to recognize these efforts and, in fact, lays the blame on the Central Valley Project, without consideration of other parties to the problem. This bill ignores the fact that the wetlands and river habitat available for spawning had been reduced to near current levels before the Central Valley Project was in existence.

The bill as drafted would result in immediate and drastic reallocation of water throughout the Central Valley. As you know, agriculture is the number one industry in the Central Valley. A drop in agricultural production will not only have an effect on farm income, but on the economies of entire towns. The freeze in December clearly indicates the interdependency of the Central Valley economies. With a drastic decrease in farm production the unemployment rate has increased, businesses unrelated to farming have suffered losses and many are on the brink of folding.

The bill prevents the renewal of contracts until a number of conditions are met including the completion of the Bay/Delta process, which as you may know includes approval by the Environmental Protection Agency. I believe that this is an unreasonable set of conditions for the renewal of contracts. Without being able to rely on a secure source of water many farmers will find it difficult to continue operating.

This measure, in establishing fish and wildlife as a Central Valley Project purpose would upset the balance that has been carefully struck among project purposes and would actually interfere with other efforts that are currently underway to achieve restoration of the Sacramento and San Joaquin Rivers.

I am referring to the coalition formed to protect the Sacramento River. As you know, Rep. Herger has introduced legislation to implement the plan that was developed by environmentalists, water users, and state, local and federal officials with respect to the Sacramento River. The consensus building process of setting up a local advisory committee was also used successfully in the restoration of Trinity River. I am pleased that your bill this year provides for the establishment of a Central Valley Project Transfer Advisory Committee. I believe that it is important the members of the committee adequately represent all the parties interested in water allocation in California.

Efforts are also currently underway with respect to the restoration of the San Joaquin River. I am working with water users and state and local government officials to encourage the Army Corps of Engineers to conduct a study of the San Joaquin River Main Stream and Tributaries. The objective is to develop comprehensive and compatible solutions to water supply, water quality, flood control, fisheries, wildlife habitat and recreation needs. As you may know, there is also a State level effort, the San Joaquin River Management Program, being led by Assemblyman Jim Costa. This measure provides for state and local input on this issue and requires annual reports on issues which can be addressed on an interim basis.

I am also concerned about the provision of the bill that makes available 100,000 acre-feet of water for municipal and industrial use. While I understand that the revenues from this sale would be used to fund fish and wildlife restoration projects, I believe that it is unfair and dangerous to provide this water to the highest bidder. Communities should not have their water eligibility based on the wealth of the community.

Mr. Chairman, I share your concern over the condition of the rivers in California. I am committed to working toward the goal of restoring these rivers. However, I am concerned about the approach taken in S. 484 and would urge you to examine those mechanisms already in place for this restoration.

Thank you.

PREPARED STATEMENT OF HON. WILLIAM M. THOMAS, U.S. REPRESENTATIVE FROM CALIFORNIA

I appreciate this opportunity to offer some brief comments in opposition to S. 484.

I am not here today to question the desirability of increasing fish and wildlife populations in the Central Valley. I am here to question the nebulous, but nevertheless potentially catastrophic, strategy outlined in S. 484 that proponents claim will eventually achieve that laudable goal.

S. 484 does, of course, contain several vague fish- and wildlife-related objectives for the Secretary of Interior—through changes in the operation of the Central Valley Project (CVP)—to fulfill. These include a provision requiring the CVP to "protect, restore, and enhance" fish, wildlife and related habitat affected by the project; a provision requiring the CVP to provide water for public and private wetlands; a provision requiring the development and implementation of a program to fully mitigate damage suffered by fisheries; and a provision requiring a study of the CVP's effect on fisheries, and the communities, tribes and businesses that have economic, social, or cultural associations with those fisheries.

Not included in S. 484, unfortunately, is any semblance of justification, nebulous or otherwise, for targeting the CVP as the sole instrument through which the restoration of the valley's fish and wildlife population is to be achieved. Instead, the bill apparently takes it on faith that changes in the operation of the CVP can and will result in the sufficient population increases. Forgotten seems to be the fact that no one can yet say what has caused the declines in the fish populations of the Central Valley. Does the CVP have more of an impact on fisheries than the State Water Project? More than the impacts of pollutants contained in surface run-off from Bay-area municipalities? What about the impacts of industrial and domestic water demands of those same municipalities? Of dredge and fill operations in the Delta and elsewhere? Of overfishing, both legitimate angling in the Bay and off the coast, and illegal poaching? Of shrimping activities which net an undetermined amount of juvenile fish? Of competition from exotic (introduced) species? And on and on. How can a rational decision be made on how to best increase the fish population in the Central Valley when the causes of past declines remain a mystery?

S. 484 would generally prohibit the renewal of any CVP water supply contract for more than one year unless the population objectives are met and the Bay-Delta hearings now being conducted by the State Water Resources Control Board are completed (twenty year contracts would be allowed if the contractor agreed to commit for fish and wildlife purposes 10 percent of the water under the contract for the first 10 years, and subsequently committed an additional one percent of his water for each additional year of the 20 year contract). This is not a trivial provisions. It has the potential to incur massive economic and social impacts on the people of central and southern California. And it would do so with no assurance that fish and wildlife populations would be positively affected.

In sum, unless and until the proponents of S. 484 substantiate their inference that the CVP is primarily responsible for the decline in fish and wildlife populations, this bill, with its underlying requirement that the CVP alone shoulder the responsibility of mitigating and reversing those declines, should be resisted.

Senator **BRADLEY**. Thank you very much.

Congressman Dooley.

STATEMENT OF HON. CALVIN DOOLEY, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. **DOOLEY**. Yes, Mr. Chairman. I also would like to submit my statement for the record. And I will be summarizing my remarks.

First, I want to thank you for giving us this opportunity to speak with you and to Senator Seymour. And I also would like to echo Senator Seymour's request that we would also like to have a hearing out in the Central Valley, which would be most impacted by this measure.

I represent the 17th congressional district, which includes the counties of Fresno, Tulare, Kings, and Kern counties. So, I have many communities in the agriculture industry which is almost exclusively reliant on the water that is provided by the Central Valley Project. I guess some of my concerns with the legislation and the way that it has been promoted to date is that it has cast the farmers and the beneficiaries of the Central Valley Project almost as villains, and being totally responsible for some of the environment degradation that has resulted from the way that the CVP project has been operated. And I think when we heard Senator Cranston's comments about it serving a limited clientele, again contributes to this sentiment and this perception, which I think is not constructive.

I have communities which are almost totally reliant on agriculture. Certainly the freeze that devastated this region earlier this year demonstrated the economic intertwine between agriculture and the entire economy. I have the—Tulare County is now experiencing a 22 percent unemployment rate. I have communities which are now facing a 50 percent unemployment rate because of the impact of the freeze.

If the Central Valley Project Improvement Act was implemented in its form as it is currently constructed, it could also have similar devastating impacts on this region. And when I have people that are lined up for blocks now to participate in food banks, when I have my citizens in the city of Orange Cove that were rationed down to 15 gallons a day, who are totally reliant on CVP water, when we hear about the potential for 20 percent or even greater amounts of water being taken away from contractors in this, it raises a great deal of concern to us.

When we talk about the concept of use it or lose it, I would also like to point out that when we are talking about trying to develop additional underground aquifers, we are all ready suffering from the overdraft of our aquifers to the tune of 1.5 million acre feet. When we take water out of this region, we also have the potential to further exasperate that problem.

You know, I am a farmer, myself, as my family has been for about four generations. And I guess one of the issues that is of great concern to me and a lot of other farmers in that region, even though I do not receive water from the CVP Project, is the 1-year contract renewal process. It is just difficult and it will result in almost the total inability to gain financing. If you cannot demonstrate to a creditor that you are going to have a secure source of water for an extended period of time, they are going to be very reluctant to provide you with any financing in order to provide for your operations.

And when you start looking at not just the impact that this will have on the farming community, but on the entire business community and the economy of the valley, I think we can begin to understand just how serious some of these problems that could manifest itself from this legislation.

I want to make very clear that there is no question that we believe that we should address some of the environmental concerns which are at the heart of this legislation. What we are trying to promote, those of us in the valley, is that they are not mutually exclusive. We still can assure the economic viability of agriculture and still provide for environmental enhancement, but it has to be done in a cooperative manner, and it has to be done by trying to build a consensus approach to this effort.

I think one of the things that we must do first is identify realistic and attainable environmental goals. And second, we must determine how much water and how much money it will take to achieve those goals. And third, devise a plan and a firm time table for attaining them. You know, such approach would provide for equal participation by State and the Federal Governments, agriculture water users, and environmental organizations, fishery groups, and representatives of all the communities and parties with a stake in the future of the Central Valley.

As Mr. Condit indicated, we already have a model for this type of problem solving, and it has been successful in the Upper Sacramento River. Assemblyman Costa, who addressed your committee in Los Angeles, also identified the San Joaquin River Project, which is also a model.

I was very heartened to hear that you are interested in taking the Federal bureaucracy out of imposing hardships on the use of their operations of the CVP. I would concur with that, and I think that that is what almost argues for trying to develop an approach that will involve the State and the local entities, which are already operating, in trying to develop a consensus for developing the conjunctive uses of water that you have identified. How can we most effectively meet the environmental objectives and still ensure that we are going to maintain the long-term economic viability of this region.

I am a new member here, I have only been here 4 months, but you know, in that short time, I have seen just how successful we can be by getting differing points of view together, to try to achieve a solution. And I think we have achieved that, in some ways, in the House in the Reclamation Reform, which you worked so hard last year in trying to deal with. And I think we have a measure now that ensures, again, that agricultural interests and environmental interests and the Federal Government's and taxpayers' interests are being represented.

I am interested and committed to working with you and other points of view and trying to fashion a similar consensus opinion to address many of these serious problems we are facing.

[The prepared statement of Mr. Dooley follows:]

PREPARED STATEMENT OF HON. CALVIN DOOLEY, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. Chairman and members of the Subcommittee: First, I want to commend the Chairman for holding this, the second hearing on his Central Valley Project Improvement Act. This is complex and far-reaching legislation that must be given careful and complete consideration. I am pleased that Mr. Bradley recognizes this and is planning to hold a third hearing, possibly in the Central Valley of California. I assure you, the people of the Central Valley would welcome a hearing in their community, and I would be happy to do anything I can to assist you in arranging one.

I represent the 17th District of California, which encompasses all of Tulare and Kings counties and parts of Fresno and Kern counties in the southern Central Valley. It is one of the most productive agriculture regions in the world. The food and fiber grown by our farmers feed and clothe millions—millions—of people throughout the country and the world every single day.

Chances are that by the end of today, most of the members of the Subcommittee and most of other people in this room will have used or consumed an agricultural product grown in the Central Valley of California. The cotton in the clothes many of us are wearing, some of the fruits, juices or dairy products we had for breakfast, the vegetables we had for lunch or will have for dinner, probably came from Central Valley farms.

Which means that most of the people in this room have sometime today directly benefited from water delivered by the Central Valley Project.

Does that make the people in this room despoilers of the environment? Destroyers of fish and wildlife? Greedy and powerful fat-cat special interests? Of course not. But critics of the project, even well-intentioned, thoughtful critics, have been so successful in demonizing irrigated agriculture that it is difficult for many people to think of the CVP's beneficiaries as anything but big, rich corporate villains.

The truth is otherwise. In my Congressional District, most of the farms that receive federal irrigation get it from the Friant Unit of the Central Valley project. The average size of an irrigated farm in the Friant Unit is roughly 100 acres. Yes, there are some very big operations out there, and, yes, some of the farmers in my District are well-to-do, as are some farmers in New Jersey, Iowa, Georgia and everywhere else. But the vast majority of the farms that receive water from the Central Valley project are small, family farms. They are at the heart of rural communities whose very existence depends upon continued agricultural productivity—depends upon a reliable supply of water from the Central Valley Project.

There are no fat cats enjoying "lavish" federal subsidies in these towns. In fact, the drought and a devastating December crop freeze have pushed unemployment rates as high as 50 percent in some places in my District. Which means that many beneficiaries of the Central Valley Project are at this moment waiting in line to receive donated food.

As currently drafted, the Central Valley Project Improvement Act appears to be a product of the farmer-as-villain mindset. Its provisions are punitive rather than corrective, apparently aimed at making agriculture "pay" for its transgressions, real and imagined.

That's unfortunate because the problems that the bill attempts to solve are real and need to be addressed promptly and with certainty.

The Central Valley Project should be held to a higher standard of environmental protection than it is now. Damage to fish and wildlife resources directly attributable to the project must be mitigated soon, not at some distant point in the future. The project's resources also can and should be used to enhance fish and wildlife values and to restore, if possible, losses of the past. Water marketing, water conservation and irrigation drainage management also are issues that must be dealt with if we are to prepare California for the future.

At the same time, we must recognize that the Central Valley Project is not the sole source of agricultural water in the Central Valley. About half of the water delivered to farms in the Central Valley is provided by local projects. It is not fair to place the entire burden on correcting all of the Valley's fish and wildlife problems on the federal government and Central Valley Project users. Restoration and mitigation goals must be realistic, solutions comprehensive, and burdens fairly distributed.

Speaking as a fourth-generation Central Valley farmer, I can tell you that it is absolutely essential—essential—that any solution to California's water problems provide farmers with certainty about their water supplies. The bill's provisions barring renewal of water service contracts for more than a year at a time are completely unacceptable. Without a long-term guarantee of water, farms in the arid West are not viable. Period. As it is currently drafted, the bill adds layer upon layer of uncertainty for agriculture water users while—strangely—offering new long-term contracts for municipal users to the highest bidder.

Mr. Chairman, I sincerely believe that correcting the environmental problems in the Central Valley and ensuring the vitality of its agricultural economy are not mutually exclusive. By that I don't mean we should address environmental problems only so long as it is comfortable for water users to do so. No. Sacrifices, even painful sacrifices, will have to be made. But in its current form, your bill requires that all of the sacrifices be made by CVP farmers and agricultural communities.

We can assure environmental quality and economic vitality only through a California-based approach aimed at achieving a consensus in, first, identifying realistic and attainable environmental goals; second, determining how much water and how much money it will take to achieve those goals, and, third, devising a plan and a firm timetable for attaining them.

Such an approach would have to provide for equal participation by the state and federal governments, agricultural water users, environmental organizations, fishery groups and representatives of all of the communities and parties with a stake in the future of the Central Valley. As you know, this type of problem-solving process has been successful on the Upper Sacramento River, and the state has begun a similar program for the San Joaquin River. These models are not perfect, but they do provide a starting point for discussions. They certainly hold a far greater promise for success that a heavy-handed "solution" imposed by Washington.

As you know, I am new to Congress. But in the short time that I have been here, I have already seen how a consensus approach to problem solving can be successful.

Earlier this year, several of my colleagues from the Central Valley and I sat down with the Vice Chairman of the House Interior Committee, Mr. Miller, and set about to resolve our differences on Reclamation Reform. As Mr. Bradley knows from personal experience, this is an extremely difficult issue. Despite heroic efforts on his part last year, the Senate failed to reach agreement on how best to eliminate abuses of the Reclamation program. Last week, Mr. Miller and my Valley Colleagues and I reached such an agreement. We did this by putting aside the rhetoric and focusing instead on achieving mutual goals. Our agreement, which will be sent to the Senate shortly, eliminates serious problems in the Reclamation program protecting the vitality of the Central Valley's agricultural economy. If Californians can do that for Reclamation reform, we can do it for the Central Valley Project. We welcome your assistance, Mr. Chairman.

Senator **Bradley**. Thank you very much, Congressman Dooley. I appreciate both of your testimonies. And if you could, let me just ask you a couple of questions so we have your full views reflected. Under the bill, we assure that State law, not the Federal Government, would set the terms for transfers or banking of CVP water. Is that a good idea, do you think, to have it done with State law?

Mr. **Dooley**. Well, I think there is some merit to that. I think what also should be understood is that even in the contracts that are presently issued for the CVP, the State still has the authority to allocate water to areas of need. And even if it is fish and wildlife purposes, we have that mechanism in place and that is what is somewhat of a concern to us. That we have the CVP or the Federal Government supposedly wanting to intercede to set specific amounts of water that are going to be allocated when we have a mechanism in place.

And especially, I guess, is even more concerning, we have the figure that 92 percent of the wetlands were lost, as Senator Cranston said, because of the CVP. The CVP is still only responsible for about 50 percent of the developed water in this region. And we cannot hold it responsible entirely for creating the environment.

Mr. **Condit**. Mr. Chairman, I agree with what my colleague just said, anytime that you can get the decision closer to home is good. And I believe that there is merit in getting it as close to the people of California to make that decision.

Senator **Bradley**. Both of you expressed concern that the bill forces mitigation for damage not caused by the CVP. Would you feel easier if we were quite explicit at what is mitigated is damage caused only by the CVP?

Mr. **Dooley**. What I think, you know, the approach that we should be taking, and I think we have touched on it, and you have touched on it, is that by bringing the State, local entities, and the Federal Government together, first determining what is the environmental impact of all the water projects there, then determining what level of environmental enhancement we can realistically develop that can provide for the improvement in the fisheries and the water fowl refuges. And then determine how much water that is going to take. And then, go back to these same entities, which have contributed to the degradation of the environment there, and find out how we can most effectively and efficiently generate the water and the financial resources which are needed to achieve those.

Senator BRADLEY. If I could, simply as a matter of time I would like to ask you a series of questions, because there are provisions of the bill that I know we would like to hear your opinions of, so if you could just give me your responses we might move through, and I do not know if Senator Seymour and Senator Burns will want to also ask questions, but just so that we can go through, let me ask you a couple of questions.

The bill authorizes Federal grants to growers to implement water conservation measures. Is that a good idea—Federal grants for water conservation measures?

Mr. CONDIT. Absolutely.

Mr. DOOLEY. I think any time we can place incentives—economic incentives for farmers to institute——

Mr. CONDIT. Actually, I am carrying a bill that does that, so I think that is a good idea.

Senator BRADLEY. The bill would cap the annual financial responsibility of CVP water and power contractors for fish and wildlife restoration. It would cap the amount. In other words, there is not an unlimited amount. We set a cap. Is that a good idea?

Mr. DOOLEY. Well, when we are talking about—the cost is one aspect of it, but I think one of the more serious concerns is how much water is it going to take to achieve these objectives, and that is where we ought to—I think farmers and contractors are much more concerned with is a cap on how much water is going to be required. Certainly caps on the cost is in everyone's interest.

Mr. CONDIT. I agree with my colleague. I am going to have to excuse myself, Mr. Chairman, but I am going to leave you in the hands of Mr. Dooley, and everything that he says I am in agreement with.

[Laughter.]

Senator BRADLEY. Thank you very much, Congressmen, for coming. I appreciate that.

Mr. DOOLEY. Could we talk about reapportionment right now?

[Laughter.]

Senator BRADLEY. Let me ask you, the bill gives essentially Californians most of the responsibility for decision making on how to mitigate CVP fish and wildlife damage. Is that a good idea to give that responsibility to Californians?

Mr. DOOLEY. Well, absolutely, and again I think we use the models in the Upper Sacramento and the San Joaquin River proposal. The AB 3603, I think it is. Those are the models.

Senator BRADLEY. The bill puts CVP water and power contractors on an advisory committee to explore the possibility of transfer of the CVP to the State of California. Is that a good idea?

Mr. DOOLEY. That is something that—we have talked with many of our constituents there. They have some interest in it. I cannot categorically say that it is a good or a bad idea at this time. It is one which I appreciate you including it as a discussion item, and it is something we need to explore.

Senator BRADLEY. The San Joaquin Valley drainage program estimates that about 200,000 acre feet per year of water can and should be conserved on the valley's west side, and my question to you—this is needed in order to avoid serious drainage problem. It is a real problem. How do you recommend that the water conservation be achieved?

Mr. **Dooley**. I think there are a number of different groups out there that are currently developing or involved in the research on how do we reduce the amount of drainage water that results from irrigated agriculture on the west side? These studies are still in their infancy, many of them. A lot of it is going to source reduction which might create some water for that, that could be used for agricultural purposes.

Senator **Bradley**. It has been suggested that there is a problem about transferring water—CVP water—out of the Central Valley, and that has been an expressed concern on the part of a great number of people. Do you think we should be concerned about the transfer of water out of the Trinity River Basin?

Mr. **Dooley**. Well, I think that I agree that any time that you start transporting water out of the basin that it has general effects. It is not just a local effect.

Last year we had a well that went dry. While we do not get any surface water on our farming operation, we still benefit, obviously, from other people being less reliant on our underground aquifers. If we saw the widespread movement of water out of the San Joaquin Valley, we are going to have a dramatic impact on those of us who also rely on the underground aquifer. As far as the Trinity Basin, I think the same principles hold.

Senator **Bradley**. You do?

Mr. **Dooley**. To some degree. If we know their underground aquifer is going to be seriously depleted by the removal of water, we have—I think there are water rights issues there that we have to be responsible to.

Senator **Bradley**. Can you give me some rationale of why CVP water users should not have the same right as other California water right holders to essentially market their water? Why should they not have the same right as somebody who holds water under the State water program?

Mr. **Dooley**. At this point, I think every project that is authorized, if it is either a Bureau of Reclamation policy or whatever, has some societal benefits that oftentimes—and public trust issues that oftentimes will supersede individual rights, and in this case we have to determine what the impact is going to be on the entire region that will result from the exportation of water.

If we have the communities of Fresno, Bakersfield, Visalia, and others which are going to see their water supplies—who are now almost totally reliant on the underground aquifers—being depleted by the exportation of water, then yes, I think we have to provide some reasonable policy limitations to that exportation.

Senator **Bradley**. So you would want to limit the rights of CVP water users in ways that State water——

Mr. **Dooley**. At this time, I think we ought to be very careful about seeing water freely marketed that would result in large amounts of water leaving the Central Valley.

Senator **Bradley**. So would you permit California to impose whatever conditions it wants on water rights held by the Bureau for the CVP? I mean, should the State be able to essentially impose some conditions?

Mr. DOOLEY. Well, the State currently has a great deal of leeway already with the surface water, and I think they have instituted responsible policies on how that is handled.

Senator BRADLEY. So you would have no objection to making that explicit, that the State does have the right?

Mr. DOOLEY. At this time, I would be inclined to say yes, but I obviously would like to do some more investigation on this before I categorically could say.

Senator BRADLEY. The last question I have for you—and having been here for 4 months, you will learn why your colleague, who was here longer, had a pressing engagement.

Let me ask you, we are talking about a problem that is very real, and that is the endangerment of fish and wildlife, and there are other forces moving in addition to this bill, and how would you feel if a Federal court took jurisdiction over the Central Valley Project and administered it out of a lawsuit, claiming that the Endangered Species Act has been violated?

Mr. DOOLEY. Obviously, that is a great concern to us, Senator Bradley. What we are saying, and what my constituents are saying, who represent anywhere from the shoe store on the Main Street of Dinuba to the small farmer in Visalia to the larger farmer on the west side, is that we need to take a responsible approach to meeting the environmental needs of ensuring our endangered species, of our fisheries and our water fowl areas, at the same time ensuring that we are going to protect the economic viability and vitality of that region.

They are not mutually exclusive, and what we are advocating and what I am advocating is that we approach this with a State and local and Federal involvement in trying to determine what are the objectives that we need to achieve, and then determining how we can most effectively do so, and I think that with a good faith effort on that part we are going to meet everyone's needs, and that we would not have the Federal Government—that they would see a good faith effort and they would not intercede.

Senator BRADLEY. Can you think of any reason—any reason—why the Bureau should not be expressly empowered to operate the CVP for any purpose recognized as beneficial under California law?

Mr. DOOLEY. I think that there is a great deal of merit to giving the Bureau some greater responsibility and ensuring that some fish and wildlife needs are met.

Senator BRADLEY. But anything that is beneficial under California law, the CVP should basically——

Mr. DOOLEY. Well, the project currently, obviously, now, it is 90 percent ag and basically 10 percent urban/municipal/industrial.

The use of the water has to be allocated in a manner which is going to be consistent with what the total societal benefits are, and it has to be done responsibly, and we are not advocating that things are always going to stay the same as they currently are.

Senator BRADLEY. Well, let me thank you very much.

Senator Burns, do you have any questions?

Senator BURNS. Thank you, Mr. Chairman. I have got another appointment here at 3:30 p.m. I have got to go to the White House and get jumped on, I guess. I have just got a couple of questions.

If you would clarify—I am waiting for Secretary Underwood to kind of explain some things up there that I have got to ask about. I am vaguely familiar—I used to travel in California years ago for the livestock industry, and I guess this was back in the 1960's, when a lot of these projects were just being developed, and most of them had already been developed and were in use, but they were starting to expand.

I am interested in this bill, and I do not think you are the right guy to ask, but has there been an assessment of how much damage was done by the development of this project, and what has to be done to restore some of that? Can that be addressed by a State plan alone? It does not have to be a Federal plan, does it?

Mr. DOOLEY. Well, I would support that contention. However, I also see nothing wrong with the Federal Government and Congress participating in the process and the Bureau of Reclamation participating in the process to determine what is the damage and how can we rectify some of that damage.

Senator BURNS. Would you still agree that the question that was asked a while ago by Senator Bradley and properly so, that you believe in Federal grants for water conservation for farmers?

Mr. DOOLEY. If that is something that we determine is a policy that is in the best interest of this country to encourage greater conservation and that is what it is going to take, well then, yes, I think there is some merit to that.

Senator BURNS. Would you also agree with the penalties that will be assessed if they are not complied with?

Mr. DOOLEY. Absolutely.

Senator BURNS. I have no further questions. Thank you.

Senator BRADLEY. Senator Seymour.

Senator SEYMOUR. Thank you, Mr. Chairman.

Mr. Dooley, I heard you cite some rather sobering statistics relative to unemployment rates in some of the counties that you represent, unemployment of farm laborers, and understandably, as both you and I know, they are suffering at the hands of an arctic freeze and the fifth year of a drought.

Let us assume that S. 484 were already law. Let us further assume that under one of its provisions, one of your farmers who employs 100 or so farm workers, his water contract was up for renewal, and in the negotiating process he ended up with not a 40-year contract, as he is used to, but a 20-year contract with a provision that 20 percent of the allocation must be given exclusively to fish and wildlife purposes. Under those conditions—you are a farmer. What impact, if any, would that have on the farm workers under your employ?

Mr. DOOLEY. Well, obviously, there are a lot of factors that play into this. One would be, do you have the alternative—an underground aquifer—and in some of the areas that are served by the CVP project that is not the case, and in those cases you are going to see not just the 20 percent reduction in production, but you are also going to see a greater impact because of the inability to find financing in order to continue your operation. So there will be some areas that go completely out of business.

I think what is interesting, the correlation on what has happened here with the freeze is, where we have seen the 22 or 23 percent unemployment in some regions is also then in some of these small agricultural communities, where we see sales receipt down by 50 percent. This impacts all the businesses in that region.

That is what our greatest fear is, is that unless we determine how much water it is going to require on the front end to achieve some of these environmental objectives, if we go in too quickly we could have some severe economic and social impacts from the legislation as it currently is interpreted by myself.

Senator SEYMOUR. One final question, Mr. Chairman.

Mr. Dooley, suppose that if one of six conditions, as set forth in the bill, had not been met, for whatever good reasons, and you were a farmer whose contract had come due; and until those six conditions are met the language of the bill requires that the Secretary shall not—shall not, that is pretty straightforward—enter into any new contracts or renewals, et cetera, what might it be like to farm without a contract at all?

Mr. DOOLEY. Well, again, it would be very difficult. Water is the lifeblood of our economy, and agriculture—or rather, it is the lifeblood of agriculture, and agriculture is the lifeblood of the valley economy, and if—when we have jeopardized the long-term availability of a water supply its repercussions will be disastrous, and that is our concern, and again, I just want to stress that these objectives are not mutually exclusive, that we can achieve this by a responsible and concerted approach to try to resolve those.

Senator SEYMOUR. Thank you, Mr. Chairman.

Senator BRADLEY. Thank you, Senator Seymour.

Congressman Dooley, let me thank you very much. You have been extremely forthcoming and helpful and direct with this subcommittee, and I appreciate it very much, and I think you have been very constructive.

Mr. DOOLEY. Well, thank you, and we would appreciate helping to organize a hearing out in the valley, too, sometime in the near future.

Thank you.

Senator BRADLEY. We now have our panel of Government agencies, experts, and others.

Let us begin with the Honorable Dennis Underwood, Commissioner of the Bureau of Reclamation; Michael Brennan, Executive Assistant Director of U.S. Fish and Wildlife; Patrick Hayes, Director for Trust and Economic Development, Bureau of Indian Affairs; Richard Sanderson, Office of Federal Activities, EPA; Dan Sumner, Deputy Assistant Secretary for Economics, U.S. Department of Agriculture.

Let me welcome all of you gentlemen. This is quite an overwhelming panel here in terms of the fire power before the subcommittee at the moment, and Senator Seymour and I are going to have to be very strict here to keep all of you under control.

Mr. Underwood, why do you not begin?

STATEMENT OF DENNIS B. UNDERWOOD, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Mr. UNDERWOOD. Mr. Chairman, there was some expression—I do not know if that still is the case—to just do a quick overview of the water supply in California. I am not sure if that is still necessary.

Senator **Bradley**. It is not necessary for me. I do not think it is necessary for Senator Seymour unless you think it is instrumental to your presentation.

Mr. **Underwood**. I think in some cases it was just to help people who are not familiar with the water flows, that type of thing, and what the needs are. But if that is not the case, then we would be more than happy to proceed.

Senator **Bradley**. Unless somebody walks in, I think you ought to go ahead.

Mr. **Underwood**. Thank you, Mr. Chairman. And I would request that my statement be made part of the record.

It is really a pleasure to testify today on something that I think is a little unusual. I think in terms of the goal everybody is in agreement. I think everybody is in agreement that there is a need to do some restoration of fish and wildlife resources within the Central Valley and many other places of the United States.

And I would like also to acknowledge your courage in addressing the issues. There are some longstanding problems within California dealing with water resources. I have had some personal experience because I worked for the State of California Department of Water Resources on the California water plan for a number of years. And I think it is good to make this point.

A lot of these problems that we are talking about extend back a period of about 20 to 30 years, so some of these problems are not necessarily new problems. What is at issue here is more on the approach of how do you succeed. And I think what is key is, it has taken 20 to 30 years to build a consensus or a cooperative spirit to potentially address the issues.

And I think a lot of that is what Senator Seymour made reference to and some of the other members made reference to. Some of the efforts that are ongoing now in terms of fish and wildlife restoration—that process, that approach, building of consensus, having defined actions, defined impacts, defined costs, is a good, solid approach prior to looking at potential legislation that would be needed to help implement those actions.

I think what is also important is that it has been a very open process, a public process where you did have Federal, State, and local input. And you also had an opportunity to review—in the case of the Upper Sacramento you had a chance for Federal, State, and local review of those plans, those impacts, and those costs.

Let me again reiterate that we support the goals of appropriate balancing and equitable treatment of all uses of water for the CVP project, and that includes the protection and the restoration and the enhancement of fish and wildlife resources.

Now, let me just highlight some of the concerns of the bill that I have. And again, it deals with the approach. A couple areas of the bill that are of concern to me and the Department are the inconsistency with State primacy in terms of water allocation and the appropriate balancing of uses. In some cases, you are having the Federal Government do the allocation. In the bill, like I indicated to you, in terms of approach there is really a lack of defined plans or associated costs and impacts to achieve the goals that it establishes. And you really have a lack of opportunities for Federal, State, and local review.

It also places, I believe, the entire burden on correcting fish and wildlife problems in the Central Valley on the Central Valley Project and its users. And I think it has been commented before 50 percent of the agricultural water use within the Central Valley comes from local projects. There has been a substantial amount of other types of development of resources, but there are also other impacts that have led to the cause of the loss of habitat.

And a lot of those outlined in my testimony have to do with sand and gravel operations, stream bank protection, flood control, harvesting of fish and wildlife resources, et cetera, that have many variables involved that are affecting the fish and wildlife. And without addressing those also, you are not assured of any success in terms of achieving your goals.

It also creates some economic uncertainties that would adversely affect the availability of long-term financing for water users. It also may jeopardize repayment contracts on the project, and potentially impact the area's economy, like some of the comments that have already been noted.

Also, in terms of the highest bidding for water, it is not really, I believe, in keeping with appropriate balancing of uses. Potentially, you would have the water migrate toward the people who have the most funds. I am not sure that that leads to the appropriate balancing and use of resources.

Also, there is the potential, when you start looking at, obviously, the projects—whether it is a State water project or the CVP project, or other major projects that deliver water throughout California—if, in fact, you start looking at making some changes in terms of water, you may run into operation constraints and limitations. Because they are designed for a certain hydraulic flow. And that has to be accounted for because you may have some very severe limitations on what you potentially could do with transfers of water.

For these reasons and others that are contained in my statement—there are some specific acknowledgements within the statement—the Department opposes the approach of the bill, and, given the ongoing studies and efforts to restore the fish and wildlife habitat, find that the legislation is not necessary at this time. Again, I think what is needed is that approach where you define actions, you define the costs, you define the impacts, and then have an opportunity to see if legislation is needed to achieve the success.

Now, let me summarize just very briefly why, because here we are talking about a certain amount of reliance on this process or this approach. And let me just highlight what is going on in a few of the river systems in terms of restoration of fish and wildlife.

For the Trinity River, again, these activities are outlined in more detail in my statement. But there is a public involvement in a multi-agency effort. First of all, you have Fish and Wildlife and Reclamation in a very cooperative effort in their 7th year of a 12-year study to determine what flows are needed to protect the fisheries in the Trinity River.

You also have ongoing habitat improvement in terms of gravel spawning areas and rest areas for the anadromous fish. Also, we are looking at sediment control. In fact, we were just doing the dedication of Buckhorn Dam. One of the major problems in the Trinity River is sediments that cover up spawning areas. Buckhorn Dam will provide for sediment control in that regard. Also there is a substantial amount of tributary habitat improvement going on. And also, we are looking at the modernization of the Trinity fish hatchery.

Moving over to the Sacramento River. Again, involving in a multi-agency effort, local, State, Federal agencies, has to do with what Senator Seymour referenced in terms of the Upper Sacramento and fisheries and habitat management plan. Again, studies being done and the public is involved.

Let me just identify some of the activities that are ongoing. Red Bluff Diversion Dam Fish Passage Improvement Program allows for the migration of the fish both up and down the river in terms of the migrating salmon going up, and also the smolts going down and also raising the gates on the dam during the winter months. This year we raised them from December 1, I believe, through May 1st to, again, maximize the fish migration.

Again, we are also looking at habitat improvement in terms of spawning areas. We have instituted fish breeding on canal diversions. We also have a proposal for temperature control. We have a draft planning report and a final EIS which has been filed with the EPA, and we expect a record of decision on July 31. That is another area that potentially will need some authorization and some appropriations, because what was originally thought to be maybe a $5 million project may be in the neighborhood of $50 million.

Tributary habitat enhancement—again, similar to the Trinity. Riparian habitat, in terms of temperature control, which is very vital in terms of the salmon in the Sacramento River. In other words, having trees and stuff to help keep the water temperature down. Because the ambient water temperature during the summer becomes very critical for the hatches and the survival of the fish after the hatch.

Also, in terms of river regiment modification, we are now looking at a period of time when the smolts are traveling down, the idea of flushing them down. In other words, 3 days of higher releases to help them in their travel. Particularly in cases when we have water-short years like we do this year, to help the salmon migrate farther up we play with temperature and actually warm the water to try to get them to migrate farther north. So again, we have a better opportunity to control, under those conditions, the water temperature in the breeding areas.

Let me move now to the San Joaquin River. I think you will recall that the Secretary of the Interior, as part of the contract renewals, initiated a San Joaquin Basin river resource management initiative. The whole focus of that effort was to improve the water-related environment focusing on fisheries, wetlands, and water quality. The State has also initiated a similar effort to the one they have done in the Upper Sacramento, again, a multi-agency total public involvement process.

Let us move to the San Joaquin Basin Wetland Restoration and Development Program. This program extends from the Kesterson cleanup, not only to replace the lost wetlands. I think if you look at the plan we put together, it goes way beyond what was actually lost in terms of wetlands. It is to help restore and improve the wetlands in the San Joaquin Valley. It has coupled with that significantly to meet the restoration and development objectives of the North American Waterfowl Management Plan for the Northern San Joaquin Basin.

Let me move now to the refuge water supplies in terms of wildlife. What is going on there? Again, a multi-agency effort, with public involvement, has 10 national wildlife refuges, four State wildlife management areas, and one private managed wetland. We are in the process of conducting feasibility studies. I think you are aware of the first study that we put out. In terms of the water needs we defined various levels for the wildlife refuges.

Again, this is a feasibility report, and we will be developing a preferred plan at the interim and optimum levels of meeting water supplies, and it would contain defined costs and defined impacts. In addition to that, during the interim, because of the drought we have modified some of the operations trying to assure that the fish or the wildlife refuges get hardship water. Because of the dire emergency supplemental appropriations bill, the potential drilling of wells, we are using some of those funds.

In fact, the first $10 million out of the $25 million is almost purposely earmarked all for fish and wildlife, not necessarily just in California. But the vast majority of the initial $25 million that we are setting up as priority is dedicated to aiding in the case of providing water supplies for fish and wildlife purposes.

Let me move now to the Stanislaus River. We also have a fisheries study going on, again, multi-agency, involving also the Corps of Engineers. This study is to help determine, again the quality, the flows, the quantity, and the habitat needs for the Stanislaus River so you can come up with a definite plan of action.

Presently we are making releases of Goodwin Dam during April and May. And again, it is a gradual flush for the juvenile salmon to increase their survival rates going down the Stanislaus River.

Let me move now to the San Joaquin Drainage Program activities. Again, this is to address some of the problems with drainage I think you just made reference to not too long ago. There is the San Joaquin Drainage Program Action Plan. There is also the National Irrigation Water Quality Control Program, again, aimed at improving drainage management, with a lot of focus on the San Joaquin Valley. Again, in these cases, you are looking at studies that define plans, costs, and impacts.

In summary, the State infrastructure, Federal, State, local, has been extremely important to the State in providing economic wellbeing. Projects provide for necessary water supplies, development growth, flood control, power generation, river regulation, recreational benefits, and improvements to navigation and, yes, even in fish and wildlife benefits. Even though those projects have provided for fish and wildlife benefits, there is no question that the Central Valley Project and other water resources projects as well as other activities have impacted fish and wildlife resources and the habitat in the Central Valley.

I believe everybody embraces the goal of restoring fish and wildlife resources, and we believe cooperative efforts under way will provide for the appropriate balancing of all uses.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Underwood follows:]

PREPARED STATEMENT OF DENNIS B. UNDERWOOD, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Thank you, Mr. Chairman I appreciate the opportunity to appear before the Subcommittee today to discuss S. 484, a bill to establish conditions for the sale and delivery of water from the Central Valley Project, California, a Bureau of Reclamation facility, and for other purposes.

This legislation contains a number of innovative ideas relating to difficult issues in the Central Valley, and we commend the Chairman's leadership in attempting to address those issues. However, we have several specific concerns, which are outlined later in my testimony. In addition, I will discuss ongoing studies and efforts to restore fish and wildlife habitat. While the Department supports mitigation and restoration, and is willing to work with the Committee towards this end, the Department opposes S. 484 as unnecessary at this time.

A major intent of S. 484 is to restore fish and wildlife habitat in the Central Valley. The Administration shares that desire. In support of the goals of Section 6, the Bureau will strive to operate the CVP so as "to protect, restore and enhance fish, wildlife, and related habitat affected by the project, and to provide equitable treatment for fish, wildlife, and related habitat with the other primary purposes for which the Central Valley Project is authorized and operated."

We also support the objective of Section 6(b) to provide firm water supplies for the National Wildlife Refuges in the Central Valley and are taking the steps necessary to do so.

As to Section 6(c), the Bureau is committed to the continued development and adoption of restoration programs to restore anadromous fish levels on the Sacramento, San Joaquin, and Trinity Rivers and their tributaries, as shown by our ongoing studies and efforts.

Years ago, the State of California, with the support of the Congress, decided to develop the water resources potential of California's rivers, based on a desire for economic development and growth. These goals have clearly been met, and the State and the Nation have benefited and will continue to benefit from the Central Valley Project and other facilities.

Multi-purpose water projects developed by local, State and Federal entities have played a significant role in meeting human needs. Water development in the Central Valley has provided substantial economic benefits. The Valley is one of the most productive agricultural areas in the world. It generates billions of dollars in personal income and tax revenues each year.

In addition, the Central Valley Project has played an important role in meeting growing demands for municipal and industrial water supplies, as well as providing for river regulation, flood control, power generation, recreation benefits, and improvements to navigation.

On the other hand, there is no question that the Central Valley Project and other water resource projects have impacted fish and wildlife resources and their habitats in the Central Valley.

There are also other factors contributing to the decline of fish and wildlife populations in that area. These include: gravel mining operations, river bank clearance and stabilization practices, flood control improvements and operations, harvest of fish and wildlife, water pollution, introduction of exotic species, and land-use practices.

Mr. Chairman, the Bureau of Reclamation, in cooperation with others, is involved in various ongoing studies and efforts to restore fish and wildlife habitat. We are encouraged by the cooperation and commitment being demonstrated by all parties. The Bureau has developed a good working relationship among Federal, State, Tribal, and local entities. Through the following initiatives, the Department anticipates further progress in addressing environmental and habitat needs.

These studies and efforts include the following:

> The Trinity River fishery has been the subject of intense environmental investigation and restoration efforts over the past several years. Reclamation and the Fish and Wildlife Service are in the seventh year of a 12-year multi-agency

study to determine the long-term flow levels necessary to protect the Trinity River fishery resources.

The Trinity River Basin Fish and Wildlife Program Task Force has initiated a significant habitat improvement plan directed at restoration of that fishery. The recently completed Buckhorn Dam and Reservoir for sediment control to protect spawning habitat are part of the Trinity River Basin Fish and Wildlife Management Program. The restoration program is legislated to continue until 1995. Over $57 million has been allocated to restore the fish and wildlife resources of the Trinity River.

The Upper Sacramento River Fisheries and Riparian Habitat Management Plan of January 1989, prepared by the State of California, is a product based on studies and a public involvement process which included representatives from Federal, State, and local interests. Completion of the items recommended in that plan will be a first step in the improvement of the Sacramento River fishery. We believe many of the plans components can contribute toward environmental improvement. In addition, the Upper Sacramento River Task Force has formulated an operation plan for the management of the fishery resources in the Upper Sacramento River for the fourth consecutive year. The Task Force, headed by Reclamation, includes representatives of the California Departments of Water Resources and Fish and Game, the National Marine Fisheries Service, the Fish and Wildlife Service, the Corps of Engineers, and the Western Area Power Administration.

The Red Bluff Diversion Dam Fish Passage Action Program is being carried out by Reclamation to improve predator control and fish passage at Red Bluff Diversion Dam on the Sacramento River. This year, alternatives will be identified for improving the migration of adult fish past the dam. A study team, headed by Reclamation and composed of representatives of the Fish and Wildlife Service, the California Department of Fish and Game, and the National Marine Fisheries Services, is examining a number of fish passage options. Throughout its development, this fisheries project has involved the cooperation of Federal and State agencies, water user groups, and local and regional organizations.

In addition, for the last five years, Reclamation has raised the gates at the Red Bluff Diversion Dam to give maximum upstream access to migrating adult winter-run chinook salmon in the Sacramento River. The gates remain open from December 1 until about April 1. Local farmers, fishery agencies, and Reclamation work together to ensure this practice is carried out.

The Bureau of Reclamation is cooperating with the Fish and Wildlife Service to assist winter-run chinook salmon in the Sacramento River. In addition, the Bureau has developed and executed a program, in coordination with the Fish and Wildlife Service, the California Department of Water Resources, and water users, to increase flows for one week on the Sacramento River to move hatchery smolts from the Coleman National Fish Hatchery. Unfortunately, because of the drought, shortages of supplies prevented us from doing that this year. We intend to continue these releases in future years whenever practical.

Reclamation has made improvements to the fish trap at Keswick Dam to allow fish stranded at the dam to be captured and transported to the Coleman Fish Hatchery.

At the direction of Secretary Lujan in 1989, Reclamation undertook the San Joaquin River Basin Resource Management Initiative to improve the water-related environment in the San Joaquin River Basin with particular emphasis on fisheries, wetlands, and water quality. We believe the effort will yield positive results.

As a result of the recently enacted State legislation, A.B. 3603, the State of California has launched an effort in the San Joaquin River Basin similar to the Upper Sacramento River Fisheries and Riparian Habitat Management Plan process.

The San Joaquin Basin wetlands restoration and development program, a joint action plan of Reclamation, the United States Fish and Wildlife Service, and California Fish and Game will replace wetland habitat lost at Kesterson Reservoir and significantly meet restoration and development objectives of the North American Waterfowl Management Plan for the Northern San Joaquin Basin.

Reclamation is in the process of completing a two-part study of the water requirements and the necessary delivery facilities to meet the needs of wildlife areas in the Central Valley managed by the Fish and Wildlife Service and the California Department of Fish and Game.

The Bureau of Reclamation is working closely with the Fish and Wildlife Service to drill several wells on the Sacramento Wildlife Refuge to provide much needed water during drought periods and allow conjunctive use of both surface and ground water at the Refuge. Funding provided by the 1991 Dire Emergency Supplemental Appropriations Act will be utilized for similar efforts at other refuges in California and other Western States.

Reclamation's Stanislaus River Fishery Study is analyzing flows, water quality, and other data used to conduct water temperature model studies to evaluate current fishery conditions as a basis for possible future restoration. Releases from Goodwin Dam to the Stanislaus River are being boosted in April and May this year to help gradually flush juvenile salmon down river and to improve their potential for survival. This fishery operations is being carried out by Reclamation in conjunction with the California Department of Fish and Game, the U.S. Army Corps of Engineers, and the Tri-Dam Project, the agency operating Goodwin Dam.

The San Joaquin Valley Drainage Program and the National Irrigation Water Quality Program are ongoing efforts to address agricultural drainage problems in the San Joaquin Valley.

As you can see, Mr. Chairman, there are numerous encouraging cooperative studies and efforts underway to address fish and wildlife concerns throughout the Central Valley. We recognize that many of these are just beginning and that much more remains to be done. We concur that beneficiaries of the Central Valley Project should bear, along with other water resources projects, the responsibility for restoring its share of habitat losses. We are concerned, however, that S. 484 may create economic uncertainties that could adversely impact the availability of long-term financing for water users. Further, the bill does not address other causes of habitat decline; therefore, some goals for fish and wildlife resources may, in fact, not be achievable.

The bill would require mitigation of effects of agricultural, municipal and industrial uses. In doing so, the Administration is concerned that it not preempt State authority to allocate water and balance competing uses. For example, under one section of the bill, for up to eight percent of Project water, the United States, rather than California, would be the ultimate decision maker on water allocation and use. This would seem to violate the above stated principle. Also the bill does not define plans, costs, or impacts to achieve the goals it establishes.

As the bill would affect Federal revenues and direct spending, it is subject to the "pay-as-you-go" (PAYGO) requirements of the Budget Enforcement Act of 1990.

Section 7 would establish a Central Valley Project Restoration Fund, the monies in which may be expended without further appropriation. These increases in direct spending appear to be completely offset by new revenues. Other provisions of the bill could alter Federal revenues.

These provisions include:

Section 4(c), which would allow contracts to be renewed for more than one year if at least ten percent of the water is dedicated for fish and wildlife purposes;

Section 8(b), which would make power available for fish and wildlife purposes at project rates; and

Section 8(h), which would authorize financial assistance for water conservation projects in the form of reduced water prices.

As it is uncertain how such provisions would be implemented, the PAYGO effects are difficult to quantify. Assuming that the Congressional intent is that water and power rates continue to be set in such a way as to recover the cost of operating and maintaining the CVP, we believe the overall PAYGO effects would be negligible.

Other specific concerns with S. 484 are:

Section 4, dealing with limitation on contracting, would limit any new sales or deliveries of water from the Central Valley Project for any purposes other than fish and wildlife until a number of conditions are met, with the exception of 100,000 acre-feet for municipal and industrial purposes. In addition, the complexity of these conditions, which would have to be met by the Secretary before contracts could be agreed upon, may be compounded by being subject to the "Citizen Suits" authority contained in Section 9. The combination of the two sections may inject uncertainty into the contracting procedures, by restricting contracting in the Central Valley Project, jeopardize some repayment contracts on the project, and, to the extent it does, impact the area's economy accordingly. We also are concerned with Section 4 because it would set up conditions precedent to Section 6. The Bureau will assure, however, that it will not contract any unallocated water before considering impacts on fish and wildlife resources.

Section 5, requiring improved water management and conservation, would allow sales to the highest bidder, with 25 percent of the net proceeds used to help finance the Central Valley Project Restoration Fund. As you know, the Department has issued a policy supportive of water transfers involving Federal facilities. We believe that this policy, which provides an economic incentive for transfers, will be an effective way to promote conservation rather than the many regulatory measures in the bill in Section 4. We have a 1991 Central Valley Project transfer policy in effect and are working on implementing a longer-term policy. We believe that the 25 percent tax provided for in Section 5 on such transfers could be difficult to administer and reduce beneficial transfers.

The other provisions of Section 5, providing district authority over water transfer, are more appropriately matters of State law and local decision. The restrictions on contracting and contract renewals would create uncertainty, possibly making it difficult for farm producers to acquire necessary financing.

While supporting the goals of Section 6, we are concerned that it would establish a complex set of conditions and requirements that are unnecessarily restrictive for programs and which may be unattainable.

Section 8 duplicates existing Secretarial authority and allows power and energy resources of the Central Valley Project to fulfill the energy requirements for fish and wildlife facilities. The Department believes that some reasonable bounds might be provided to prevent inappropriate uses.

Section 10 would establish the Central Valley Project Transfer Advisory Committee. It is the policy of the Administration to pursue the transfer of projects, when and where appropriate. We are willing to explore the possible transfer of the Central Valley Project. However, we question the necessity of establishing, in statute, a Committee for that purpose.

In conclusion, I would like to state that the Departments preferred approach combines the efforts of all interested parties at the Federal, State, and local level. It is one that maintains State primacy for allocating water and balancing competing needs. It provides for Federal, State, and local review of defined plans, associated costs, and impacts.

Thank you, Mr. Chairman, for the opportunity to testify. I would be pleased to answer any questions.

Senator **Bradley**. Thank you very much, Mr. Underwood.

Mr. Brennan.

STATEMENT OF MICHAEL BRENNAN, EXECUTIVE ASSISTANT TO THE DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

Mr. **Brennan**. Thank you, Mr. Chairman.

Senator **Bradley**. I think in order to facilitate this, we might have to urge you to, if you can, limit your comments to 6 or 7 minutes.

Mr. **Underwood**. I purposely made it so they only have 3 minutes apiece.

Mr. **Brennan**. Thank you, Mr. Chairman. The Fish and Wildlife Service appreciates the opportunity to testify on S. 484, the Central Valley Improvement Act, the goals of which are extremely important both to the Service and to the fish and wildlife resources of the State of California.

As we have mentioned earlier, the Central Valley Project is the largest water-development project in the State of California, the largest Federal water-supply project in the Nation, and it has had major effects and impacts on fish and wildlife resources.

One of the major thrusts of S. 484 is to ensure that fish, wildlife, and habitat impacts are considered up front in Central Valley Project operations and planning. The Service supports this and believes it is very important. It is critical to factor the fish and wildlife and other environmental impacts into the planning process at the earliest possible point.

Invariably, environmental problems are more difficult, more costly, and possibly impossible to remediate the longer you wait. The longer you wait, the longer it takes to recognize and deal with the impacts.

The stakes are very high. There was some reference, I believe, by Senator Hatfield to the Endangered Species Act in his testimony. Ultimately, if we are not successful throughout the country and in California in maintaining viable populations of fish and wildlife species, the Endangered Species Act remains as a safety net. And we have all experienced the dislocation and uncertainty that the Endangered Species Act can inject into resource management. It is a prospect that I think none of us welcome.

With respect to S. 484, we believe that the conservation of fish and wildlife resources in the Central Valley require major changes in the operation and management of the project. The resources affected by the project include significant numbers of endangered and threatened species, migratory birds, anadromous fish, and wetland resources. The Service has legal responsibility for those resources and is working to conserve and protect them.

The Department agrees with the intent of S. 484, but believes that much of it may be being handled already due to studies and activities already under way, many of which are outlined by the commissioner, and I will not repeat them. Specifically, we support the goals of section 6 to protect, restore, and enhance fish. wildlife, and related habitat affected by the project, and to provide equitable treatment for fish, wildlife, and related habitat with other authorized project purposes.

We support the concept of a trust and a fund as generally proposed by section 7 whereby project water and power users finance projects to restore fish and wildlife and ecosystems adversely affected by the project, and the concept of section 8(b), by which electrical energy used for operation and maintenance of fish and wildlife facilities would be deemed project power.

The continuation of ongoing studies and implementation actions, many of which have been outlined, would help address the significant and detrimental effects to fish and wildlife resources from past and ongoing water resource development programs in the Central Valley, particularly the CVP. California has more Federally listed, endangered, threatened, and candidate species under the Endangered Species Act than any State in the continental United States. In large part, that is a consequence of past and ongoing water and other resource development projects that are present in the CVP and other parts of California. The CVP has accounted for a major portion of the adverse impacts to fish, wildlife, and endangered and threatened species.

We strongly support the goals of section 6, which would require the operation of the project to provide equitable treatment for fish and wildlife resources and habitats, provide firm water supplies to State and Federal refuges, and require the development, adoption, and implementation of anadromous fish restoration programs.

The problem of contaminated irrigation return flows is critical and needs to be addressed as well. Currently, return flows are commingled with clean water in various conveyance channels and are carried to wetlands and refuges, or discharged to the San Joaquin River. Other return flows are discharged into evaporation ponds which are used by migratory birds for feeding, breeding, and foraging. Many of those ponds have been documented as posing mortality and reproductive impacts on those birds.

As Mr. Underwood has testified, the Bureau, with the full support of the Department and the Fish and Wildlife Service, has made a commitment to embrace the goals of sections 6(a) and 6(b), and to implement these insofar as possible. The Bureau prefers the cooperative approach which has been implemented—and to which we owe a great deal of thanks to Commissioner Underwood for his efforts personally. The Service supports that approach and is committed to working with the Bureau and the other involved State and Federal entities to achieve positive results.

We believe that a report by the Secretary of Commerce on anadromous fish populations envisioned by section 6(d) is unnecessary. We think it would provide only a limited amount of new information. If this information requirement is retained, we would recommend that the Secretary of the Interior be charged with performing these functions. The Department, through the Fish and Wildlife Service, has been designated lead agency for fish and wildlife resource studies through its various authorities, including, particularly, the Fish and Wildlife Coordination Act. It may be possible to achieve some institutional efficiencies as a result of this proposed change.

We support the concept of a Central Valley Project Restoration Fund and a Central Valley Project Valley Restoration Trust. If the bill is enacted, we recommend that the Fish and Wildlife Service be assigned coordination responsibility for the fund and trust under the Secretary of the Interior. We have a very close working relationship with the California Department of Fish and Game. That, coupled with our responsibilities for biodiversity, endangered species, migratory birds, and water development project evaluation in the Federal sector would put the Service, we believe, in an ideal position to effectively coordinate the initiatives itemized under the fund and trust activities.

We are concerned that prohibiting the Secretary from making expenditures from the fund until the State of California certifies its commitment to implement State actions for the Upper Sacramento River may pose some significant resource constraints, and we would recommend that it not be included. This requirement might unnecessarily hinder programs which would yield significant fish and wildlife resource benefits on equally important matters that perhaps are unrelated to the Upper Sacramento River.

We support the concept, as I mentioned, of providing Central Valley Project electricity for fish and wildlife facilities and those purposes of the project. We think making project power available would facilitate more effective operation of our refuges and hatcheries, and more effective remediation of impacts relating to the CVP activities.

In closing, I would like to say that we continue to work with the Bureau of Reclamation to improve conditions for fish and wildlife resources. We are optimistic that improvements can be achieved, and look forward to continuing to work together.

Thank you, Mr. Chairman, for the opportunity to present our views.

[The prepared statement of Mr. Brennan follows:]

PREPARED STATEMENT OF MICHAEL BRENNAN, EXECUTIVE ASSISTANT TO THE DIRECTOR, FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

Mr. Chairman, thank you for the opportunity to testify on S. 484, the Central Valley Improvement Act, the goals of which are very important to the Service and to the fish and wildlife resources of California. As you know, the Central Valley Project is the largest water development project in the State of California and the largest Federal water supply project in the nation. It has had major impacts on fish and wildlife resource.

Most of those impacts have been adverse and are largely not compensated. To ensure the conservation of fish and wildlife resources, major changes in the operation and management of the project are necessary. The resources affected by the project include significant numbers of endangered and threatened species, migratory birds, anadromous fish and wetland resources. The Service has legal responsibilities for these resources, and is working to protect and conserve them.

The Department agrees with the intent of the bill but believes that much of it may be unnecessary due to studies and activities already underway. Specifically, we support:

> The goals of Section 6, to (1) protect, restore, and enhance fish, wildlife, and related habitat affected by the project and (2) provide equitable treatment for fish, wildlife, and related habitat with other authorized project purposes;
>
> The concept of a Trust and a Fund as generally proposed by Section 7, whereby project water and power users finance projects to restore fish and wildlife and ecosystems adversely affected by the project; and
>
> The concept of Section 8(b), by which electrical energy used for operation and maintenance of fish and wildlife facilities would be deemed project power.

The continuation of ongoing studies and implementation actions would help address the significant and detrimental impacts to fish and wildlife resources from past and ongoing water resource development programs in the Central Valley, especially the Central Valley Project. California has more Federally-listed, endangered, threatened, and candidate species than any State in the continental United States. In large part, that is a consequence of past and ongoing water project development, and the attendant extensive agricultural and urban developments that they support throughout the State. The Central Valley Project has accounted for a major portion of the adverse impacts to fish, wildlife, and endangered and threatened species.

We strongly support the goals of Section 6, which would: require the operation of the Central Valley Project to provide equitable treatment for, and to protect, restore, and enhance, fish, wildlife, and their habitat; provide firm water supplies to State and Federal refuges; and require the development, adoption and implementation of a restoration program for anadromous fish populations. The problem of contaminated irrigation return flows needs to be addressed as well. Currently, these return flows are co-mingled with clean water in various conveyance channels and carried to wetlands and refuges, or discharged to the San Joaquin River. Other return flows are discharged to evaporation ponds used by migratory birds for breeding and foraging. Many of these ponds have already been documented as causing deaths and deformities to birds.

As Mr. Underwood has testified, the Bureau, with the full support of the Department, has made a commitment to embrace the goals of Sections 6(a) and 6(b) and to implement those insofar as possible. The Bureau prefers the cooperative approach, recently implemented. The Service supports that approach and is committed to working with the Bureau and other involved entities to achieve positive results.

We believe a report by the Secretary of Commerce on anadromous fish populations, required by Section 6(d), is unnecessary since it would furnish only a limited amount of new information. If this provision is retained, we recommend that the Secretary of the Interior be required to perform these functions. The Department of the Interior, through the Fish and Wildlife Service, has been designated lead agency for all fish and wildlife resources studies through its authorities under the Fish and Wildlife Coordination Act.

We support the concept of a Central Valley Project Restoration Fund and a Central Valley Project Restoration Trust and, if the bill is enacted, recommend that the Fish and Wildlife Service be assigned coordination responsibility for the Fund and the Trust under the Secretary of the Interior. Because of its close working association with the California Department of Fish and Game, along with its responsibilities for biodiversity, endangered species, migratory birds, and evaluation of water development projects, the Service would be in an ideal position to efficiently coordinate the initiatives itemized under the Fund as well as the Trust activities. Prohibiting the Secretary from making expenditures from the Fund until the State of California certifies its commitment to implement State actions for the Upper Sacramento River, should not be included. This requirement might unnecessarily hinder progress on other equally important matters that do not relate to the Upper Sacramento River area.

We support the concept of providing Central Valley Project electricity for fish and wildlife purposes of the project. Making project power available would facilitate more effective operation of the Service's refuges and hatcheries.

In closing, I would like to say that we continue to work with the Bureau of Reclamation to improve conditions for fish and wildlife resources. We are optimistic that improvements can be achieved.

Thank you again, Mr. Chairman, for the opportunity to present our views. I will be pleased to respond to questions.

Senator **BRADLEY**. Thank you very much, Mr. Brennan.

Mr. Sumner.

STATEMENT OF DANIEL A. SUMNER, DEPUTY ASSISTANT SECRETARY FOR ECONOMICS, DEPARTMENT OF AGRICULTURE

Mr. **SUMNER**. Thank you for the opportunity to present the views of the Department of Agriculture. The bill, by affecting the condition of sale and delivery of water in the Central Valley, clearly may have significant impacts on California and the Nation's agriculture.

Water supplied by the Central Valley Project is critical to California agriculture. Some 97 percent of the 7 million acres of harvested cropland in California is irrigated. The Central Valley contains 78 percent of those irrigated acres. And the CVP provides irrigation water to about 3 million acres of some of the most productive cropland in the world.

The region provides some 80 percent of orchard crops grown in the State of California; 50 percent of the vegetables grown in the State are produced in the Central Valley. As you may be aware, California is the number one agricultural State in the Nation. It accounts for 16 percent of U.S. crop output value, 50 percent of the fruit production, a third of the vegetable production in the Nation.

Not only are the areas served by the Central Valley Project key regions and affected severely, potentially, they are highly dependent on water from the CVP. The economy of the region itself is clearly dependent on agriculture. This area produces 41 percent of the orchard crops and 22 percent of the vegetables grown in the State.

Reduction in irrigation water availability would have implications for the regional economies far beyond agriculture, as we have heard earlier. A negative consequence of reduced agricultural activity affects farmers, farm workers, rural workers, as well as the financial system in the overall economy. Given the importance of agriculture to California and the Nation, given the importance of irrigation to California agriculture, the USDA has a clear interest in the issues raised by S. 484.

The effect of the bill's provisions likely would be a shift of water availability from agriculture to other uses. I would like to raise two concerns from the perspective of the U.S. Department of Agriculture.

First, it seems that under the provisions of S. 484, the realistic alternatives facing farmers whose contracts are due to be renewed would be to either have a 1-year contract for irrigation water, or a reduction of water availability up to 20 percent. This bill may significantly modify the contract period for these projects in a way that is inadequate for the purposes of making investments in agricultural conservation activities, or in production systems. We have heard about the financial consequences and the availability of credit problems for farmers under a 1-year contract.

The second concern has to do with the potential reduction of up to 20 percent in current water use. Reduced irrigation water availability would reduce the productivity of California agriculture, especially in those regions that are most dependent on water from the CVP. The consequences of a reduction of 20 percent of water supplies from the project would be devastating to this portion of the State that has already been hard hit by drought and, as we heard, by the freeze earlier this year.

We should note that improving water transfers is a move in the right direction; however, we are concerned that tax paid by agriculture producers on the proceeds of water sales does reduce the benefits from water transfers. Facilitating transfers, represents a more market-oriented approach to water distribution. The Department of Agriculture has been encouraging related ideas in farm programs in the United States, and internationally in the context of the Uruguay Round. Improved incentives is consistent with a more market-oriented agriculture.

In closing, the USDA is concerned that any modifications to water availability take into account the viability of agriculture.

Thank you, Mr. Chairman and Senator Seymour, for the opportunity to present the views of the Department of Agriculture.

[The prepared statement of Mr. Sumner follows:]

PREPARED STATEMENT OF DANIEL A. SUMNER, DEPUTY ASSISTANT SECRETARY FOR ECONOMICS, DEPARTMENT OF AGRICULTURE

Good morning, Mr. Chairman, and thank you for the opportunity to present the views of the U.S. Department of Agriculture on S. 484. The bill, by affecting the conditions for sale and delivery of water from the Central Valley Project, would have a significant impact on California and the Nation's agriculture.

Water supplied by the Central Valley Project is critical to California agriculture. Up to 22,000 farmers receive deliveries from the Central Valley Project. About 97 percent of the 7 million acres of harvested cropland in the state is irrigated. The Central Valley contains 78 percent of the irrigated acres in the state about 6 million acres. The Central Valley Project provides irrigation water to about 3 million acres of the most productive crop land in the world.

The region produces 99 percent of rice grown in the state, 97 percent of the cotton, 78 percent of the wheat, and about 78 percent of the sugar beets. Also:

Eighty percent of the orchard crops grown in the state are produced in the Central Valley,

Fifty percent of the vegetables grown in the state are produced in the Central Valley, and

Eighty-three percent of other crops, such as tree nuts grown in the state, are produced in the Central Valley.

California is the number one agriculture state in the Nation. The state accounts for 16 percent of U.S. crop output value—50 percent of fruit production, 33 percent of vegetable production, 23 percent of cotton production, and 16 percent of rice production.

The two areas hardest hit by reduced water supply may be the Friant unit of the Central Valley Project along the east side of Madera, Fresno, Tulare, and Kern counties, and those served by the San Luis unit of the Central Valley Project along the west side of Merced, Fresno, and Kings counties. These regions rely on the Central Valley Project for about 40 percent of their water supply with the remainder coming from ground water sources.

Not only is this region highly dependent on water from the Central Valley Project, the economy of the region is highly dependent on agriculture. This area produces 41 percent of the orchard crops grown in the state, 22 percent of the vegetables, 17 percent of the sugar beets and 88 percent of the cotton. The 2.8 million harvested acres in the region are 37 percent of the state total. Reduction in irrigation water availability would have implications for the regional economy far beyond agriculture. The negative consequence of reduced agricultural activity would affect the financial system and the overall economy.

Given the importance of agriculture to California and the Nation, and given the importance of irrigation to California, the USDA has a clear interest in the issues raised by S. 484. The effect of the bill's provisions would be to shift water availability from agriculture to other uses. In so doing, it affects the contracts for delivery of irrigation water in important ways.

I would like to raise two major concerns from the perspective of the Department of Agriculture. Under provisions of S. 484, the realistic alternatives facing farmers whose contracts are due to be renewed seem to be either (a) only a one-year contract for irrigation water, or (b) a reduction in water availability of up about 20 percent.

The bill may significantly modify the contract period for the delivery of water for the Central Valley Project. A one year contract is totally inadequate for the purposes of making investments in agricultural conservation activities, and production systems that require a long payback period. Many of the affected crops in the Central Valley are orchards, and even the annual crops require significant long term planning. Consequently, the option of a one year contract at current levels or a 20 year contract at reduced levels causes real problems for producers.

The second major concern is the reduction of up to 20 percent in current water use. Reduced irrigation water availability would reduce the productivity California agriculture and especially in those regions that are highly dependent on water from the Central Valley Project.

The consequences of a reduction of 20 percent in water supplies from the Central Valley Project could be devastating to this portion of the state, which has already been hard hit by the drought.

Further, if a producer opts for reduced water availability, he or she would still only have a 20 year contract, compared to normal 40 contract currently in use. While 20 years may be an adequate payback period for some agricultural investments, this may be an inadequate period of time for investments by municipalities in water systems that may rely on agricultural sources through the water marketing provisions of the bill.

The provisions to improve water transfers are steps in the right direction. However, we are concerned that a tax paid by agricultural producers on proceeds from waters sales reduces the benefits from water transfers.

Facilitating water transfers represents a more market-oriented approach to water distribution. The Department of Agriculture has been encouraging related ideas in farm programs in the U.S. and internationally in the Uruguay Round. Improved incentives for water transfers is consistent with a more market-oriented agriculture.

In closing, the USDA is concerned that any modifications to water availability take the importance of agriculture into account. Thank you , Mr. Chairman, for this opportunity to present the views of the Department of Agriculture.

Senator **Bradley**. Thank you very much, Mr. Sumner.

Mr. Hayes

STATEMENT OF PATRICK A. HAYES, DIRECTOR, OFFICE OF TRUST AND ECONOMIC DEVELOPMENT, BUREAU OF INDIAN AFFAIRS, DEPARTMENT OF THE INTERIOR

Mr. **Hayes**. Thank you, Mr. Chairman.

Good afternoon, Mr. Chairman and Senator Seymour. I am pleased to be here to present the views of the Bureau of Indian Affairs on S. 484, the Central Valley Project Improvement Act.

We support the goals of the CVP Improvement Act, particularly section 6 in its relation to Indian tribes and the Secretary of the Interior's administration of the United States' trust responsibility to Indian tribes. We believe, however, that S. 484 may be unnecessary because of the efforts currently under way within the Department to improve water flows into the Trinity River basin. In addition to our general comments about the bill, we would recommend a minor amendment that the committee may want to consider should the bill be enacted.

Mr. Chairman, the Hoopa and Yurok Indians have long depended upon the once abundant salmon and other fishery resources of the Trinity River for their subsistence, cultural, and religious uses. There has been a significant decline of those Trinity River resources since 1963, when the Trinity River division of the CVP was completed.

In 1981, the Secretary moved to begin restoring the fishery resource of the Trinity River. He adopted a secretarial issue document which prescribed flows for the Trinity, and directed Fish and Wildlife Service to study these flows and to make recommendations which would restore the Trinity. This 12-year study began in 1985 and, unfortunately, has been faced with the California drought for the last several years.

I had mentioned previously that the Department has taken actions to revise the 1981 secretarial issue document to increase flows into the Trinity for water years 1991 through 1996. We view this as a very positive step, which we believe would negate the need for most of the provisions contained in section 6 of this bill.

In reference to section 6(e), particularly, we believe it would be helpful to the Department to develop a formal plan to meet the United States' trust responsibilities to the Hoopa Valley and Yurok tribes regarding the fisheries and water of the Trinity River, which are important to these tribes.

Mr. Chairman, I have suggested a minor amendment for consideration. The amendment we proposed would include the addition of a Yurok tribal representative on the Central Valley Project Transfer Advisory Committee established under section 10 of S. 484. The Yurok tribe has interest in the Trinity River fishery resources and is affected by this legislation. While they are not presently organized, the Bureau of Indian Affairs can represent their interest until such time as they tribe is, in fact, organized.

This concludes my statement, Mr. Chairman. I would be pleased to answer any questions.

[The prepared statement of Mr. Hayes follows:]

PREPARED STATEMENT OF PATRICK A. HAYES, DIRECTOR, OFFICE OF TRUST AND ECONOMIC DEVELOPMENT, BUREAU OF INDIAN AFFAIRS, DEPARTMENT OF THE INTERIOR

Good afternoon Mr. Chairman and Members of the Committee. I am pleased to present the views of the Bureau of Indian Affairs on S. 484, a bill entitled "The Central Valley Project Improvement Act", (CVP Improvement Act).

We support the goals of the CVP Improvement Act, especially section 6 as it relates to Indian tribes and the Secretary of the Interior's administration of the United States' trust responsibility to Indian tribes. However, we believe that S. 484

may be unnecessary because of efforts currently under way within the Department to improve water flows into the Trinity River basin. In addition to our general comments, we recommend a minor amendment for the Committee's consideration, should the bill be enacted.

For thousands of years, Hoopa and Yurok Indians have depended on the once abundant salmon and other fishery resources of the Trinity River for subsistence, commercial, and important cultural and religious purposes. Since 1963, when the Trinity River Division of the CVP was completed, salmon and steelhead production from the Trinity River has declined by as much as 80 percent.

Streamflows into the Trinity River declined from an average 1,200,000 acre-feet of water per year (AF/Y), to 120,000 AF/Y until 1981, when the Secretary of the Interior increased flows to 340,000 AF/Y in normal water years, 220,000 AF/Y in dry years, and 140,000 AF/Y in critically dry years.

The local economy, from which the tribes derive significant benefits, has also suffered severe economic impacts as a result of the fishery resource decline. The economic impact on non-tribal commercial and sports fisheries that rely on Trinity River salmon and steelhead has been in excess of $20 million per year.

The conflicts which exist among the varied interests in the Trinity, San Joaquin and Sacramento basins, have not lent themselves to easy solutions. The Secretary has attempted to address the needs of fish and wildlife, the Indian tribes, agricultural interests, and power users, but, given the complex and oftentimes conflicting demands for water, problems still exist.

In 1981, the Secretary took the first of several important steps toward achieving the restoration of the Trinity River. The Secretary issued a Secretarial Issues Document (SID) which prescribed certain flows for the Trinity River and directed the U.S. Fish and Wildlife Service to study these flows and make long-term flow recommendations. The U.S. Fish and Wildlife Service's 12-year study began in 1985, one year after the Congress passed the Trinity River Restoration Act directing the Department to fully restore the Trinity River. Unfortunately, the past several years of the study and the restoration effort have been frustrated by the California drought, which is now entering its fifth year.

As I alluded to above, the Department is considering actions to revise the 1981 SID to increase flows into the Trinity River basin for water years 1991 through 1996. We view this as a positive step, which in our opinion would negate the need for most of the provisions contained in Section 6 of this bill.

While the Congress has previously taken steps through the Trinity River Restoration Act and the Klamath River Restoration Act to protect fish and wildlife resources impacted by the CVP Project operations. Unfortunately, the drought has hampered the Department's ability to meet the objectives of this previous legislation.

In regards to section 6(e), we believe it would be helpful to the Department to develop a formal plan to meet United States trust responsibilities to the Hoopa Valley and Yurok Tribes regarding the fisheries and water of the Trinity River, which are important to those Tribes.

The amendment we propose includes the addition of a Yurok Tribe representative on the Central Valley Project Transfer Advisory Committee established under section 10 of S. 484. The Yurok Tribe has interests in the Trinity River fishery resources and is affected by this legislation. While they are not presently organized, the Bureau of Indian Affairs can represent their interests until such time as the Yurok Tribe is organized.

This concludes my prepared statement. I will be pleased to answer any questions the committee may have.

Senator **Bradley**. Thank you, Mr. Hayes.

Mr. Sanderson.

STATEMENT OF RICHARD SANDERSON, DIRECTOR, OFFICE OF FEDERAL ACTIVITIES, ENVIRONMENTAL PROTECTION AGENCY

Mr. **Sanderson**. Mr. Chairman, Senator Seymour, I would like to submit my statement for the record, if I may, and attempt to summarize it for you quickly.

Senator **Bradley**. Your full statement will be in the record.

Mr. **Sanderson**. There is a growing consensus that we must move beyond crisis management to a new long-term balanced water management, management responsive to the social, economic, and environmental circumstances of the 21st century. EPA believes that long-term solutions must include: (1) further coordinated management of Federal, State, and local water supplies; (2) greater recognition that our waters and wetlands require and deserve a firm share of the available water supply to ensure their survival; and, (3) innovative market-based approaches that encourage conservation and increase our flexibility to adapt to changing circumstances and priorities.

Management of the Central Valley Project is the major component of this effort.

The Bureau of Reclamation, of course, has not stood still in the face of the kinds of changes that they face and we have talked about.

EPA has been supportive of the Bureau's initiatives, and we are an active participant in many of their activities that Mr. Underwood so poignantly focused upon. Following our differences with the Bureau over the long-term renewal water-service contracts, EPA and the Bureau entered into a Memorandum of Understanding. This MOU established an interagency coordinating committee to provide a mechanism for mutual oversight of programs and projects of mutual interest such as water quality, wetland restoration, drought management, irrigation return flows, and much more.

Nevertheless, EPA believes that additional steps may be appropriate to clarify that the purposes of the CVP are changing in response to changing national budget priorities and public values, and that a restoration and enhancement of healthy ecological systems, including fish and wildlife, are important project purposes of the CVP.

EPA's referral of the Friant water service contracts to the President's Council on Environmental Quality in 1989 established our concerns about protecting and restoring the many beneficial uses of the Central Valley's San Joaquin River and the San Francisco Bay/Sacramento-San Joaquin Delta areas.

One of the lessons of the current drought is, we must increase the flexibility of the State and Federal projects to deliver water supplies to areas with critical needs.

Governor Wilson's success in creating a water bank this year demonstrates that voluntary water transfers and other incentive-based approaches may provide a solution to this problem. The State has purchased approximately a million-acre feet of supplies from willing sellers—and I underline "willing sellers"—to meet essential needs and to replenish depleted reservoirs.

Voluntary water transfers are particularly promising in agricultural areas with severe drainage problems. By providing incentives to improve irrigation efficiency and reduce water usage, voluntary water transfers can raise revenues that local agricultural districts can use both for improving their irrigations systems and alleviating water quality problems associated with agricultural return flows. Transfers also may help remove marginal, low-value agricultural land from production, and reduce the need for additional drainage projects.

The bill proposes to allow CVP water to be distributed to any necessary purpose throughout the State's integrated water delivery system. The legislation proposes the use of Federal facilities for voluntary transfers. I remind us that the administration supported this concept in its recent drought legislation.

The proposed bill also increases economic incentives for agricultural areas to improve their drainage practices. The Bureau and EPA have been especially concerned about the selenium contamination issues associated with the CVP as first discovered at Kesterson. Progress toward solving the selenium problem has been slow. The linkage of water contracts to drainage management and water conservation programs is one way to ensure that the beneficiaries of Federal water supplies will help pay for the external costs of the CVP on water quality and ecological resources of the San Joaquin Valley.

Another provision requires that the development of best management practices criteria for agricultural water conversation be consistent with the Final Report of the San Joaquin Valley Drainage Program. EPA was an active participant in this interagency cooperative study lead by the Bureau, and we believe that it has been useful in developing a consensus for environmentally and economically sound solutions to the drainage problems of the San Joaquin Valley—solutions that will improve water quality and long-term agricultural productivity.

EPA recognizes the need for ecological restoration efforts and the concept that critical needs should be met before new contracts are signed for the uncommitted yield of the CVP. We commented on the Bureau's 1989 proposal to market water through new contracts. We stated that it would be difficult to determine how much CVP firm supply exists that can be made available for new contracts until the appropriate flows necessary to improve water quality and protect beneficial uses, including the anadromous fish, including salmon, are established and met in the San Francisco Bay/Delta estuary.

This issue is pending before the State Water Resources Control Board. These provisions are consistent with EPA's comments on the Bureau's recent proposal to market additional CVP supplies. In response to comments on the Bureau's new water contracting proposal, the Bureau withdrew the proposal pending completion of the Bay/Delta water quality hearings.

Firm supplies to the Central Valley wildlife refuges are particularly important. Today there are only about 290,000 acres of wetlands left in the Valley and only 80,000 of the 290,000 acres are in the protected State and Federal refuges. In my testimony before the President's Council on Environmental Quality on EPA's referral on the Friant water contract renewals, I stated that renewal of contracts for the same quantity under similar terms and conditions would contribute to the continued decline in wetland quality and quantity both in the Central Valley and the San Francisco Bay and Delta areas. The decline faces greater importance on the designated wildlife refuges in the valley. Few of these refuges have long-term, firm supplies of water with which to maintain the wetlands crucial to the waterfowl.

The bill's provisions to provide firm supplies to these refuges are drawn from the Bureau's Central Valley Refuge Water Supply Investigation. This comprehensive study prepared by the Bureau with assistance from the U.S. Fish and Wildlife Service and the California Department of Fish and Game describes in detail the benefits associated with providing firm supplies to these refuges. As a result, we believe that all parties recognize these requirements, and that there is a consensus to handle these administratively.

Finally, EPA would like to express its support of the concept of the Central Valley Project Restoration Fund. This fund would collect a portion of the revenues from CVP water and power sales and use that money to develop and implement ecosystem recover programs in the CVP service area. This funding mechanism will provide the financial resources necessary to accomplish the goals of the bill, and will ensure that the beneficiaries of the CVP pay the cost of mitigating for the environmental impacts of the projects.

In addition, we believe that the mitigation projects should be selected and developed by an intergovernmental committee of State, local, and Federal representatives. EPA believes that the technical, environmental, and policy expertise of State and local authorities is critical to ensuring that any environmental restoration effort is carried out in a manner that is consistent with the environmental and economic planning decisions of the people in the State of California.

In summary, EPA believes that the bill could strengthen the role of the Bureau in addressing the new opportunities and environmental challenges in the management of California's water resources. As always, however, the key to accomplishing water management goals will be a cooperative and coordinated effort on the part of all affected agencies and interests.

Thank you Senator Bradley, Senator Seymour. I would be pleased to answer any questions.

[The prepared statement of Mr. Sanderson follows:]

PREPARED STATEMENT OF RICHARD SANDERSON, DIRECTOR, OFFICE OF FEDERAL ACTIVITIES, ENVIRONMENTAL PROTECTION AGENCY

Good morning, Mr. Chairman and members of the Subcommittee. I am Dick Sanderson, Director of the Office of Federal Activities at the Environmental Protection Agency. We appreciate this opportunity to appear before the Subcommittee to comment on S. 484, the Central Valley Improvement Act.

This hearing comes at an especially opportune time. The fifth year of drought in California has forced all water users to reassess their needs, and all resource management agencies to seek more creative methods of meeting the needs of fish and wildlife, which are at historically low population levels. As we struggle to cope with the drought's impacts on already scarce supplies, there is a growing consensus that we must move beyond crisis management to a new long-term balanced water management, management responsive to the social, economic and environmental circumstances of the twenty-first century.

We believe that long-term solutions must include:

(1) Further coordinated management of Federal, state and local water supplies;

(2) Greater recognition that our rivers and wetlands require and deserve a firm share of the available water supply to ensure their survival; and

(3) Innovative market-based approaches that encourage conservation and increase our flexibility to adapt to changing circumstances and priorities.

Management of the Central Valley Project is the cornerstone of this effort. The CVP is the largest water project in the state, and supplies 20 percent of the state's needs. It provides irrigation water to over 3 million acres, drinking water to 2 million people and power, recreation and flood control benefits to numerous others.

When the CVP was authorized and construction began half a century ago, however, there was little recognition of the impacts of the population growth and water development on the state's natural resources. In the last few decades, California has experienced unprecedented population growth, and major losses of habitat have threatened the survival of native fish and wildlife that are California's heritage.

The Bureau of Reclamation, of course, has not stood still in the face of these changes. In the CVP service area, the Bureau responded by undertaking a series of environmental restoration studies and projects. These have included:

A Federal-state cooperative program on the Trinity River,

A fisheries restoration program on the upper Sacramento River, and

A comprehensive San Joaquin River Basin Resource Management Initiative to examine alternatives for improving environmental values in the eastern San Joaquin Valley.

EPA has been supportive of the Bureau's new initiative, and we are an active participant in many of these activities. Following our differences with them over the long-term renewal of water-service contracts, EPA and the Bureau entered into a Memorandum of Understanding. This MOU established an interagency coordinating committee to provide a mechanism for mutual oversight of programs and projects of mutual interest such as water quality, wetland restoration, drought management, irrigation return flows and much more.

Nevertheless, as we watch the Bureau's efforts at balancing project purposes for the CVP, EPA believes that additional steps may be appropriate to clarify that the purposes of the CVP are changing in response to changing national budget priorities and public values, and that restoration and enhancement of healthy ecological systems, including fish and wildlife are important project purposes for the CVP. EPA's referral of the Friant water-service contracts to the President's Council on Environmental Quality in 1989 established our concerns about protecting and restoring the many beneficial uses of the Central Valley's San Joaquin River and the San Francisco Bay/Sacramento-San Joaquin Delta areas.

NEW OPPORTUNITIES FOR MARKET-BASED APPROACHES

One of the lessons of the current drought is that we must increase the flexibility of the state and Federal projects to deliver water supplies to areas with critical needs.

Governor Wilson's success in creating a water bank this year demonstrates that voluntary water transfers and other incentive-based approaches may provide a solution to this problem. The state has purchased approximately a million acre feet of supplies from willing sellers to meet essential needs and to replenish depleted reservoirs.

Voluntary water transfers are particularly promising in agricultural areas with severe drainage problems. By providing incentives to improve irrigation efficiency and reduce water usage, voluntary water transfers can raise revenues that local agricultural districts can use both for improving their irrigation systems and alleviating water quality problems associated with agricultural return flows. Transfers also may help remove marginal, low-value agricultural land from production, and reduce the need for additional drainage storage projects.

The Bureau announced a new policy on water transfers in December of 1988. The policy stresses the importance of transfers in meeting future water supply needs, and pledges the Bureau's cooperation in facilitating these transactions. However, there are legal and institutional barriers which inhibit transfers in the CVP.

The bill proposes to allow CVP water to be distributed to any necessary purpose throughout the state's integrated water delivery system. The legislation proposes the use of Federal facilities for voluntary transfers. The Administration supported this concept in its recent drought legislation.

Potential environmental and local economic impacts also have been a major stumbling block in proposed water transfers in California. Although this bill provides an innovative solution to this problem, patterned after an Oregon statute, requiring that a percentage of the water proceeds from the transfers be dedicated to fish and wildlife purposes, the Bureau is seeking to address these issues internally.

WATER CONSERVATION AND AGRICULTURAL DRAINAGE

The proposed bill also increases economic incentives for agricultural areas to improve their drainage practices. The Bureau and EPA have been especially concerned about the selenium contamination issues associated with the CVP, as first discovered at Kesterson National Wildlife Refuge. Progress towards solving the selenium problem has been slow. The linkage of water contracts to drainage management and water conservation programs is one way to ensure that the beneficiaries of Federal water supplies will help pay for the external costs of the CVP on water quality and the ecological resources of the San Joaquin Valley.

Another provision requires that the development of best management practices criteria for agricultural water conservation be consistent with the Final Report of the San Joaquin Valley Drainage Program. EPA was an active participant in this interagency cooperative study lead by the Bureau and we believe that it has been useful in developing a consensus for environmentally and economically sound solutions to the drainage problems of the San Joaquin Valley—solutions that will improve water quality long-term agricultural productivity.

ENVIRONMENTAL RESTORATION

EPA recognizes the need for ecological restoration efforts, and the concept that critical needs should be met before new contracts are signed for the uncommitted yield of the CVP. EPA commented on the Bureau's 1989 proposal to market water through new contracts. We stated that it would be difficult to determine how much CVP firm supply exists that can be made available for new contracts until the appropriate flows necessary to improve water quality and protect beneficial uses (including salmon) are established and met in the San Francisco Bay/Delta estuary. This issue is pending before the State Water Resources Control Board. These provisions are consistent with EPA's comments on the Bureau's recent proposal to market additional CVP supplies. In response to comments on the Bureau's new water contracting proposal, the Bureau withdrew the proposal pending completion of the Bay/Delta water quality hearings.

Firm supplies to Central Valley wildlife refuges are especially important. Historically, California had about 5 million acres of wetlands, of which 4 million were in the CVP service areas. Today there are only about 290,000 acres of wetlands left in the valley, and only 80,000 acres are protected in state and Federal refuges. These refuges are considered among the most important in the western United States for migratory waterfowl. In my testimony before the President's Council on Environmental Quality on EPA's referral on the Friant water contract renewals, I stated that renewal of contracts, for the same quantity under similar terms and conditions, would contribute to the continued decline in wetlands quality and quantity both in the Central Valley and the San Francisco Bay and Delta areas. This decline places greater importance on the designated wildlife refuges in the valley. Few of these refuges have long-term firm supplies of water with which to maintain the wetlands crucial to waterfowl.

The bill's provisions to provide firm supplies to these refuges are drawn from the Bureau's Central Valley Refuge Water Supply Investigation. This comprehensive study, prepared by the Bureau with assistance from the U.S. Fish and Wildlife Service and the California Department of Fish and Game, describes in detail the benefits associated with providing firm supplies to these refuges. As a result, we believe that all parties recognize these requirements and that there is a consensus to handle these issues administratively.

RESTORATION FUND

Finally, EPA would like to express its support for the concept of the Central Valley Project Restoration Fund. This fund would collect a portion of the revenues from CVP water and power sales and use that money to develop and implement ecosystem recovery programs in the CVP service area. This funding mechanism will provide the financial resources necessary to accomplish the goals of the bill, and will ensure that the beneficiaries of the CVP pay the cost of mitigating for the environmental impacts of the project.

In addition, we believe that the mitigation projects should be selected and developed by an intergovernmental committee of Federal, state, and local representatives. EPA believes that the technical, environmental, and policy expertise of state and local authorities is critical to assuring that any environmental restoration efforts are carried out in a manner that is consistent with the environmental and economic planning decisions of the people of California.

CONCLUSION

In summary, EPA believes that the bill could strengthen the role of the Bureau of Reclamation in addressing the new opportunities and environmental challenges in the management of California's water resources. As always, the key to accomplishing our water management goals will be a cooperative and coordinated effort on the part of all affected agencies and interests.

Mr. Chairman, that concludes my prepared statement. Thank you again for this opportunity to share our views. I would be pleased to answer any question the Subcommittee may have.

Senator **BRADLEY**. Thank you very much, Mr. Sanderson. And let me thank the entire panel for your testimony.

Mr. Underwood, let me ask you, assuming that we can protect repayment interest, why should the Federal Government impose geographic restrictions on the transferability of CVP water?

Mr. **UNDERWOOD**. In think, in the particular case, if you are looking at any particular project, the Central Valley Project extends from a State water resource control board. And if, in fact, there was a need to potentially reallocate water, I think that is the proper mechanism to do so. I mean, that mechanism is already in place.

Senator **BRADLEY**. So you are saying that you believe that the Federal Government should not—that it should be done at the State level by the State water control board?

Mr. **UNDERWOOD**. Yes.

Senator **BRADLEY**. So that they would make the ultimate decision as to who got the water, whether it was Anaheim or San Diego?

Mr. **UNDERWOOD**. Well, in the particular case you are looking at, obviously we are concerned about the financial integrity. You are assuming the financial integrity was protected, and that is what we would be looking for—was there any conflict with congressional directives.

Senator **BRADLEY**. But assuming the repayment interests are taken care of.

Mr. **UNDERWOOD**. That is a potential case, because really what you are getting into, whether you move the water from the Central Valley to San Diego, whatever, that really is a State decision in terms of water management and water allocation.

Senator **BRADLEY**. Okay. Let me ask you, why should the Federal Government not give CVP growers the same right to market their water as other California water-right holders have?

Mr. **UNDERWOOD**. One thing you have to remember, every State is a little different, but State water law in California is that you are limited to beneficial use. You really do not own the water. You have a right to use the water, but you do not necessarily own it. Even when you are looking at the provisions of the State when you are talking about transfers, it was the idea of an incentive, if you conserve water to potentially move some of that water and that your rights would not be diminished. So it is a narrow margin. It is not necessarily wide open marketing of that water.

Senator **BRADLEY**. But is there any reason why Federal users of the CVP should have greater restrictions on them than users of the State project?

Mr. **UNDERWOOD**. Again, only from the sense that if you are to change—and that goes back to the State board—a point in use or a point in diversion, potentially you can affect other people. That has to be taken into consideration, and that is why you have to have a central administration of water rights. So if you are going to be moving some water from someplace, you need to know those impacts on third parties or other entities.

Senator **Bradley**. And the best place to determine that would be at the State level, right?

Mr. **Underwood**. Yes.

Senator **Bradley**. Let me ask you, can you think of any Federal reason why the Bureau should not be expressly empowered to operate the CVP for any purpose recognized under California law as a beneficial use?

Mr. **Underwood**. I heard you ask that question before, and I am trying to go through my mind. A particular case of beneficial use in California extends from the Porter-Cologne Act, which the sister to the Clean Water Act. Looking at whether we can potentially already operate our projects, I am not sure that there is anything that is not already there. To be perfectly honest with you, nothing comes to mind.

They do a lot of breakdowns of recreation use, warm water, cold water fisheries, that type of thing. But the Central Valley Project can be used for fish and wildlife purposes already. So I do not see any inconsistencies in terms of what they have for beneficial use and what the project can be used for now.

Senator **Bradley**. Good. Let me, then, make—I am trying to get you to clarify this, because this has come up a number of times today. Do you think the Bureau has full authority to operate the CVP for fish and wildlife?

Mr. **Underwood**. I do not see that we can use the Central Valley Project for fish and wildlife purposes, looking at the Fish and Wildlife Coordination Act, I think, and even some of the update acts of the CVP project. I do not see any barrier for using——

Senator **Bradley**. But do you have full authority?

Mr. **Underwood**. I believe so. Obviously, my legal counsel would maybe advise me something different. But looking at what statutes I have looked at, I did not see a limitation.

Senator **Bradley**. But do you need direction?

Mr. **Underwood**. If we are talking about the efforts in the Central Valley, I think we are providing that direction, along with the State and local entities. As I said before, this is something that has been 20 to 30 years in coming.

Senator **Bradley**. So you believe that you have full authority and direction to operate the CVP essentially for fish and wildlife?

Mr. **Underwood**. For fish and wildlife purposes of the project water, yes. I am not sure if you are trying to make some——

Senator **Bradley**. No, no, no. Has the Bureau ever denied a request from the State of California to change operations of the CVP on grounds that you lacked adequate authority to comply?

Mr. **Underwood**. Not that comes to mind, but there could be some past experiences.

Senator **Bradley**. We have talked a lot about the need to reuse and reclaim waste water generated by municipal water systems. Do you not think that irrigation districts should have the same requirement?

Mr. **Underwood**. To reuse water?

Senator **Bradley**. Yes; to reclaim and reuse it.

Mr. **Underwood**. I think you are getting some good partnerships going on. Sometimes it is beyond the farmers' ability to pay, and that is when you start putting some partnerships together between urban and agricultural areas.

I get concerned a little bit when we are making references to grants and stuff that would increase Federal financial burden. I think there is some creative financing that can be done that would not necessarily require Federal funds.

Senator **Bradley**. Would the administration support legislation that authorized the Bureau to purchase the water needed to restore the Sacramento and San Joaquin River fisheries?

Mr. **Underwood**. You are talking from the administration, but there is a lot of emphasis being placed on just acquiring water. I am not too sure, in some cases, that you need to acquire water. You may be able to do things in terms of timing, scheduling, modification of operations, even like what you are looking at in terms of the salmon. When you are trying to do a fish flush, a lot of people automatically think you have to go get a block of water. That is not necessarily the case.

In terms of providing for fish and wildlife service, we may not have to acquire, potentially, water. There may be ways, operationally, to meet a lot of those needs. And that is where the real challenge comes.

Senator **Bradley**. So your answer to that is that——

Mr. **Underwood**. It would have to be in conformance. We are taking a State water right—it would be in conformance, looking at the State Water Resource Control Board. If you are requiring waters of ours, they are going to be changed in place of use and changed in diversion.

Senator **Bradley**. So you do not need authority to purchase for fish and wildlife purposes?

Mr. **Underwood**. We were seeking that through the drought legislation, so I am assuming we would.

Senator **Bradley**. So you do need that. Would you support legislation that authorized the Bureau to buy farm lands on the west side of the valley as a way of dealing with the drainage problem?

Mr. **Underwood**. I think in the particular case you are looking at, again, a financial burden on the Federal Government probably would not. I think there are other ways. If there are other ways to deal with drainage or water management, there are other ways to deal with it besides just maybe purchasing.

Senator **Bradley**. What about the suggestion—would you support efforts to get the Bureau to develop additional water supplies in the Central Valley?

Mr. **Underwood**. Well, I think that, it is a cooperative. You know, we are kind of caught in the middle here. Here is a Federal agency that provides 30 percent of the water in California. Obviously, you need to integrate with the State and the Federal Government. We cannot just do a conjunctive use program ourselves. You get a lot of local districts, a lot of other entities. But I think there are—as you pointed out, too, some areas of getting increased yield. Conjunctive use surface ground waters, coordinated project operations, a lot of flexibility for increasing yield. A lot of opportunities there. It is a more effective and efficient use of water, too.

Senator **Bradley**. The more we can to do encourage that, the better.

Mr. **Underwood**. Without a doubt. And I think you are going to see when you start looking at all the alternatives, the drought brought that home. What are the alternatives? People, before, were not willing to pay for maybe conjunctive use studies, or something. But when they look at having water on hand, it may be the cheapest way.

Senator **Bradley**. Would you support expanding the Whiskeytown reservoir?

Mr. **Underwood**. For what purpose?

Senator **Bradley**. In order to restore the truly surplus Sacramento water flows that cannot be stored behind Shasta Dam.

Mr. **Underwood**. That has been talked about—not only Whiskeytown—they have looked at how do you enlarge—get greater conservation of the Trinity and Shasta system. And there are potential ways there, too. That would be something that we should look at, because there is a need for additional conservation. That is without a doubt.

Senator **Bradley**. What about storage?

Mr. **Underwood**. That is what I mean—conservation, meaning storage.

Senator **Bradley**. So you would support that?

Mr. **Underwood**. I thing looking at it to see what opportunities you have—I mean, people have proposed increasing Shasta. That is potentially high cost. You can potentially do something in Trinity. We would not be opposed to looking at any of those.

Senator **Bradley**. I will come back to another round.

Senator Seymour.

Senator **Seymour**. Thank you, Mr. Chairman.

Mr. Underwood, in relationship to the provisions of this bill, how many years to you expect it might take to undertake the programmatic Environmental Impact Statement for contract renewals?

Mr. **Underwood**. Many. It would be hard to say. You know, if you look at some of the EIS's we have going on—I have tallied that I will probably do more EIS's than any commissioner before me. Some of these are going to be a number of multi-years, without a doubt.

Senator **Seymour**. And what is the longest time it has taken to do such an assessment?

Mr. **Underwood**. I cannot say. All I know, it has been a couple of years since some of the ones we have ongoing already. Glen Canyon environmental efforts—some of those original studies stem back to the early 1980's.

Senator **Seymour**. Early 1980's?

Mr. **Underwood**. But that is not the EIS, itself. That was some of the research associated with EIS, though.

Senator **Seymour**. How long have you been with the Bureau?

Mr. **Underwood**. A year, almost approaching a year and a half.

Senator **Seymour**. And so some of these have been going on longer than your tenure?

Mr. **Underwood**. That is correct.

Senator **Seymour**. How much longer, just to guess?

Mr. **Underwood**. A couple of years. Somewhere between a 2- and 3-year period of time. I mean, that potentially could be a minimum in some cases, too.

Senator **Seymour**. Relative to section 4(b) of the bill, which would authorize you to auction 100 acre feet under not greater than 20-year contract to the highest bidder—under that particular section, given your experience, do you think that any municipality can adequately plan with a 20-year contract?

Mr. **Underwood**. It does not even have to be a municipality, really. I mean, if you are looking at dependable waters by firm water supply, it is a forever type of thing that you are looking for, whether it is fish and wildlife, municipality, any of them. The only thing is, that you would have for 20 years—if you had some substitute at the end of the 20 years—because you are going to have a reliance on that infrastructure. So you are going to need a supply.

Senator **Seymour**. Mr. Underwood, your are authorized to auction off this 100 acre feet of water. Do you now hold rights to water under State law for current project purposes?

Mr. **Underwood**. Yes.

Senator **Seymour**. And do those rights include limitations on purpose of use, place of use, and county of origin protection?

Mr. **Underwood**. Yes.

Senator **Seymour**. In order to maximize the profit from the 100 acre feet, would you need to go beyond the authorized service area of the CVP?

Mr. **Underwood**. If that is what your intent was, because the water would flow to probably the larger municipalities, yes.

Senator **Seymour**. Well, the bill says to maximize the profit.

Mr. **Underwood**. Yes. You would have to go where there is the greatest ability to pay.

Senator **Seymour**. Would this effectively require a condemnation of State water rights? And if so, do you have any estimates of what the cost might be?

Mr. **Underwood**. It would require potentially the taking of a water right unless it was done through the State water resource control board. The cost—that is hard to say, because it depends upon how far you want to carry those costs—if it is just the value of the water, or if it is the lost economic activity that was ongoing by the person that was using that water.

Senator **Seymour**. Under the terms of this measure, you had contracts for delivery of irrigation water restricted not more than 1 year, as you know, unless a number of conditions were met—six, to be specific. Realistically, how long do you think it will take for the Secretary to satisfy those requirements of those six and, therefore, before he is able to enter into other long-term contracts?

Mr. **Underwood**. There are a couple there that I would say are probably not able to be determined. And so it would be for a indeterminate period of time. I do not see maybe some of those conditions being satisfied immediately.

Senator **Seymour**. And when you reference a couple of them an indeterminable period of time, are you including in your thought processes just the governmental process, or including litigious and judicial processes?

Mr. **Underwood**. Potentially, because you would prompt probably some suits and et cetera. So it would be, yes.

Senator **Seymour**. Now, relative to the repayment for the CVP and its cost operation management that you receive, if you did not have renewed contracts, how might that affect repayment?

Mr. **Underwood**. It obviously would jeopardize the financial integrity of the project if you were not getting revenues to repay the project, either operational costs or the capital costs.

Senator **Seymour**. Thank you very much, Mr. Underwood.

Senator **Bradley**. Mr. Brennan, let me ask you, do you think the Bureau has clear and adequate authority to operate the CVP for fish and wildlife purposes?

Mr. **Brennan**. We believe the Bureau does.

Senator **Bradley**. Would it be helpful to your agency if we passed legislation which provided you with authority and funding to purchase water for fish and wildlife purposes, or do you believe that already exists?

Mr. **Brennan**. Mr. Chairman, I would have to qualify my answer based on the Commissioner's indication that the Secretary has requested authority to purchase water under the drought relief bill. I believe that would apply equally to the Fish and Wildlife Service. To my personal knowledge, I cannot add to that.

Senator **Bradley**. But you think it does have the authority and is doing it?

Mr. **Brennan**. We are pursuing acquisition of water rights in a variety of settings, most particularly and most recently, of course, being in the Pyramid Lake area there, specifically pursuant to a grant of authority to purchase water rights from willing sellers. I believe there is some question as to whether the Department already possesses such authority. I cannot speak definitively as to the answer. To the extent the Department felt compelled to request such authority in the context of drought relief, I would assume that would cover your question, as well.

Senator **Bradley**. How many Federal wildlife refuges in Central Valley have firm water supplies?

Mr. **Brennan**. To my knowledge, one.

Senator **Bradley**. Only one?

Mr. **Brennan**. Yes.

Senator **Bradley**. The others do not?

Mr. **Brennan**. The others receive what I believe the Bureau terms "interim flows." We have received flows on a nonfirm but available basis, historically.

Senator **Bradley**. Do you think that the Bureau has received—not only has authority, but has received direction to operate the CVP for fish and wildlife purposes?

Mr. **Brennan**. Based on my discussions and our office's discussions with Commissioner Underwood, it is my understanding that the Bureau has received, certainly in the specific instances with which I am familiar, direction from the Commissioner's office to manage the project with consideration of fish and wildlife resources in mind.

Senator **Bradley**. Are you familiar with the Upper Sacramento River task force recommendations?

Mr. **Brennan**. In general.

Senator **Bradley**. Are you familiar enough to say whether you think that they will ensure that juvenile and adult salmons have adequate habitat and protection?

Mr. **Brennan**. My understanding of the Upper Sacramento recommendations are that they are principally physical in nature, designed to optimize stream channel characteristics for fishery benefits. It is the Service's belief, however, that although those measures are important and will allow, from an environmental perspective, more efficient use of what water is available, that operational changes and flow changes are necessary to fully accomplish restoration of those fish resources.

So we would regard the measures outlined in the project as complementary to, but not as a substitute to, operation and flow changes.

Senator **Bradley**. Has the Bureau ever denied a request from Fish and Wildlife on the grounds that they lacked adequate authority to comply?

Mr. **Brennan**. I cannot speak from personal knowledge, Mr. Chairman, to that question. I know that—or at least I am given to understand that—historically there has been some confusion and perhaps differences of opinion within the Department as to the extent of authority that the Bureau possessed with respect to its ability to operate the CVP to accommodate fish and wildlife concerns. To my knowledge, that has been resolved.

To the extent that that accurately describes the case, I could easily envision situations where we had, for example, sought long-term contracts, perhaps. But given the uncertainty as to whether the project could be operated to accommodate those we had not been granted the contracts, I cannot provide any personal knowledge.

Senator **Bradley**. So the answer is yes, but no longer?

Mr. **Brennan**. That is my understanding.

Mr. **Underwood**. Mr. Chairman, if I may make one comment about the purchasing of water. I think there is some question whether we can, in terms of authority. We did that last year when we did some drought relief work for the wildlife refuge. The Fish and Wildlife Service used them as the vehicle to purchase the water at that time. So I think they may have some specific authority. But there is some question whether we have specific authority to allow us to do so. That is why in the drought legislation various people did include provisions for that.

Senator **Bradley**. That is why that is an important piece of legislation, or one of the reasons.

Mr. **Brennan**. Mr. Chairman, if I may, since you asked me the question and I provided you an incomplete answer, I have been advised that the Service does indeed possess authority to purchase water in addition to that authority specifically granted in, for example, the Pyramid Lake bill.

Senator **Bradley**. Let me ask Mr. Hayes about the trust resources of the Hoopa Valley tribe. The CVP obviously affects that, does it not?

Mr. **Hayes**. That is correct. Yes, sir.

Senator **Bradley**. And how does it affect that?

Mr. HAYES. By virtue of the water releases flowing into the Trinity River, Mr. Chairman.

Senator BRADLEY. Do you think that the Bureau has adequate authority to operate the CVP in order to fulfill the Secretary's trust obligations toward the Hoopa Valley tribe?

Mr. HAYES. We believe so. Yes, sir.

Senator BRADLEY. Could the CVP be operated in a manner that damages the Trinity River salmon resources that the Hoopa Valley tribe would have so much so that it would cause—they would have a cause of action against the United States?

Mr. HAYES. That could happen, sir.

Senator BRADLEY. How would that happen?

Mr. HAYES. By the shortage of water flowing into the Trinity River to allow the salmon to spawn.

Senator BRADLEY. So that the tribe, then, would have a cause of action against the U.S. Government?

Mr. HAYES. That is correct.

Senator BRADLEY. And how would you compare the flow in the Trinity River now with a year ago?

Mr. HAYES. It is lower, to my understanding, Mr. Chairman.

Senator BRADLEY. So that the possibility of such a cause of action is greater today than it was this time last year?

Mr. HAYES. Well, one would hope not, Mr. Chairman.

Mr. UNDERWOOD. Mr. Chairman, I may add—I may even add——

Senator BRADLEY. Do you have an announcement to make today?

Mr. UNDERWOOD. Yes. I was about to do that. I have been waiting for an opportunity. In the particular case, you know, we do have drought conditions in the west obviously, particularly in the California area. And we do have some appropriate balancing that we have to do for waters, and we are making waters available for various types of hardship cases.

The Trinity—in this particular case you have heard reference to critical year, that you would be down to 140. Last year we provided about 220. The Secretary this morning signed an order that was to the three Assistant Secretaries which would provide for some flows in the neighborhood of 240, and again, with the objective of looking at the 12-year study and trying to get back to a period that we can look at some of the higher flows and the impacts so that we can quantify what is needed for the protection in the future.

Senator BRADLEY. So how much more is the flow going up?

Mr. UNDERWOOD. Let us put it this way. If you are looking at the secretarial decision document prior to this time, you would be looking at a 140 flow. Last year it was 220. This year will be 240. So you are looking over substantially what was in the prior decision documents of the Secretary.

Senator BRADLEY. Let me come back, if I can, to Mr. Brennan. Then I want to go to Mr. Sanderson quickly.

What is the status of the Sacramento and San Joaquin fisheries?

Mr. BRENNAN. Mr. Chairman, both fisheries have shown very significant declines in the past 30 to 40 years.

Senator BRADLEY. Specifically with salmon and striped bass?

Mr. BRENNAN. Yes, sir. I have partial information with respect to striped bass. I believe the representatives of the State of California may be able to address that question in more detail than I can. Our focus is principally on the anadromous salmon and steel-head resource.

In the Sacramento River in the early 1950's, salmon runs on the Sacramento and its tributaries were approximately 500,000 fish or so a year. Accurate counts have been available to us since 1963, when we began counting at the Red Bluff diversion facility. In 1969, 286,000 fish of all salmon races were counted returning to the river at that point. After the drought in 1976 through 1977, those numbers had dropped to returns of 58,000 fish.

The fish counts later rebounded. Counts since 1985 have varied in the range of at the most 155,000 to 156,000 fish in the Upper Sacramento this year, maybe the lowest on record. We estimate at this point, with only partial data, that there may be fewer than 70,000 returning fish at Red Bluff.

The San Joaquin River basin gives a somewhat similar story. That basin is, I think, remarkable in that the runs in the basin are highly variable, in part because there are not as many confounding influences on the viability of the fish runs as the greater length in operational activities on the Sacramento impose.

The San Joaquin fishery is particularly responsive to changes in flow, especially in springtime outflow to get fish past the pumping facilities at the delta. As you know, the anadromous fisheries present on the San Joaquin are largely due to spawning opportunities available on the tributaries to the San Joaquin itself since below Friant on the San Joaquin main stem, the river is often dewatered. And to the extent it is not, at times in the summer flows are almost 100 percent agricultural return flows. Water quality may not be what fish would like to see to spawn and hatch in. And temperatures are inadequate.

Senator **Bradley**. What you are saying is that the population has dropped from 500,000 to 140,000 to 150,000?

Mr. **Brennan**. In gross terms, recognizing counting differences and technology and so forth, yes.

Senator **Bradley**. What has been the effect of CVP on this?

Mr. **Brennan**. I do not know if it is possible to isolate the contribution and contributing effects of the CVP. Obviously, we know that operational activities, mortality due to flow changes, temperature impacts on the river resulting from operations of the CVP for agricultural purposes, pumping facility impingement on fish screens and the like have had significant impacts. We cannot say, to my knowledge, with certainty, what percentage of that is attributable to CVP.

Senator **Bradley**. The fact is that the population is dropping dangerously. And the real question is, is it easier to restore or protect? Is it easier to restore after the endangered species problem, or to protect to avoid the endangered species problem?

Mr. **Brennan**. As a general matter, once a species hits the threatened or endangered status, the species is at a very low level. Measures taken to restore species populations are, by definition, more difficult, more expensive. And constraints on activities that may affect those species are severe.

If I may, our data indicate that on the San Joaquin itself, in the early 1970's we had 100,000 fish, more or less, returning. Populations have yo-yoed since then. Through the 1976–1977 drought those populations dropped to less than 1,000 fish. Since then, numbers have fluctuated between 30,000 and, this year, an estimated 600 returning fish—excuse me, in 1990—again, partial data, but representative of the types of habitat problems we have on that river.

Striped bass information, to the extent I am aware of it, is similar. The stripers appear to be at an all-time low. The Service, although we defer to California on this, expects conditions to get worse for the striped bass. The 1990 index, based on the end of the year, is at 4.6, and the expected average, given delta flow conditions in that year, is, I believe, 79. As far as the Service is concerned, we cannot attribute that change specifically to CVP operations or otherwise. But it is a significant impact, obviously.

Senator **Bradley**. What is happening is that it is becoming dangerously low.

Mr. **Brennan**. They are, by all accounts, becoming very low. The same conditions that led to the National Marine Fisheries Service listing of the chinook in the Sacramento River——

Senator **Bradley**. Mr. Sanderson, let me ask you, does this bill give EPA any authority that it does not now possess?

Mr. **Sanderson**. Not to the best of my knowledge. I think the bills you currently have and EPA's inherent authority over water quality is essentially the same kind of recognition that the bill intends to bring forward.

Senator **Bradley**. So that virtually any project would have to meet certain water quality standards?

Mr. **Sanderson**. That is correct, Senator.

Senator **Bradley**. Let me ask you, in terms you mentioned, the Friant contract—the renewal for 40 years—EPA's position on that was what?

Mr. **Sanderson**. Our position was that the Bureau of Reclamation should do an environmental impact statement. The Bureau and the Solicitor disagreed with us. We referred it to the President's Council on Environmental Quality.

The issue, really, was over public disclosure. We believe that, in order to reissue a contract for 40 years, the citizens of the State should understand the implications of our "ministerial action" before it is, in fact, put in place.

I think that we have come an awful long way since we have had that referral action. The Assistant Secretary for Science and Water and the Assistant Administrator for Enforcement have signed a memorandum of understanding. Mr. Underwood's deputy and I are co-chairmen of an interagency coordinating committee between the two agencies.

We have done a tremendous amount of work. In fact, I returned from Denver yesterday, having met with several of his people on a number of issues. I am particularly pleased with the progressive attitude on both issues. We have involved the regional administrators of several EPA regions, and the same is true of a number of senior field and headquarters officials with the Bureau of Reclamation.

Senator **Bradley**. So basically what you are saying is that a lot of things have happened since 1989?

Mr. **Sanderson**. I think that is a fair summation, Senator.

Senator **Bradley**. Mr. Sumner, would the Department of Agriculture oppose a change in the law which would permit Southern California growers to buy water out of the CVP?

Mr. **Sumner**. We generally support the idea of moving water to high-valued agricultural uses. I would have to look at specifics. Everything depends upon the specifics.

Senator **Bradley**. But you did give a kind of ringing endorsement here to marketing.

Mr. **Sumner**. The general idea of a market-oriented agriculture is something that this administration supports.

Senator **Bradley**. Okay. Well, Senator Seymour, do you have anything else?

Senator **Seymour**. Oh, yes, I do. Thank you.

Mr. Sanderson, the chairman asked you if, in your opinion, this measure—S. 484—gave you any new or additional authority. That is what I thought I heard him say, and I thought I heard you respond, no.

Mr. **Sanderson**. That is correct.

Senator **Seymour**. Have you read the bill?

Mr. **Sanderson**. Yes, sir.

Senator **Seymour**. Would you refer, please, to page 4, particularly lines 14 through 16, which says, "The Administrator of the Environmental Protection Agency shall have approved such standards." Are you familiar with that?

Mr. **Sanderson**. That is correct.

Senator **Seymour**. What does "approved" mean to you?

Mr. **Sanderson**. The same responsibility and authority we have now under the Clean Water Act.

Senator **Seymour**. It does not say that in this bill. It does not say the same authority you have under existing law. The word says, Mr. Sanderson, "shall have approved." That is all. Now, I would like to know what your interpretation of "approved" means. To me, it is whatever you want it to mean.

Mr. **Sanderson**. Certainly, Senator, one could interpret it that way. Our belief is that we have, under the Clean Water Act and under our water quality responsibilities with the State of California, that kind of authority currently.

Senator **Seymour**. Then I would suggest that if you believe that, would you then suggest to the chairman that the bill be amended so that in fact it assures that you do not have any new power?

Mr. **Sanderson**. From my perspective, it is self-explanatory, but I understand your concern, Senator. I would be pleased to work with the chairman on that.

Senator **Bradley**. Let me say to the distinguished Senator from California that Mr. Sanderson's opinion in this matter is important to me, but yours is more important, and if you would like to modify it we will so modify it to be clear what its intention is.

Senator **Seymour**. Thank you, Mr. Chairman. I really appreciate that attitude.

Let me ask, because there is an underlying concern—and I am asking this question of the entire panel, save Mr. Sanderson, because he does not want any more Federal power.

But in asking the same question of the other panelists, one of the underlying arguments on this bill that will be debated is the question of whether or not State's rights are at issue, and whether or not State's rights are diminished by this bill and thereby when anybody loses one right somebody else gains, and therefore it is suggested by some that Federal agencies gain.

Now, in that question, in that regard I would like to ask each of you individually under—except Mr. Sanderson, because he has already answered the question. The question very simply is, does this bill increase, diminish, or not change the current power each of your agencies have?

Mr. Sumner.

Mr. **SUMNER**. Well, this bill does not deal with the powers of the Department of Agriculture specifically, one way or the other, so I would defer to the other representatives of the Department of Interior.

Senator **SEYMOUR**. Thank you. Mr. Hayes?

Mr. **HAYES**. Insofar as the Bureau of Indian Affairs is concerned, Senator, and the powers and authorities that we have or the powers and authorities that an Indian tribe may have, I do not see that there is any change at all.

Senator **SEYMOUR**. Well, Mr. Hayes—well, we will follow up on that question.

Mr. Brennan.

Mr. **BRENNAN**. Senator, I do not believe that S. 484 to the best of my understanding expands Fish & Wildlife Service authority beyond those we already possess.

Senator **SEYMOUR**. How about your interests?

Mr. **BRENNAN**. I do not believe it expands the scope of our interest either, Senator.

Senator **SEYMOUR**. Mr. Underwood.

Mr. **UNDERWOOD**. I would probably say, in terms of allocation of water, that it probably would in terms of the Federal Government, as opposed to having the State allocate waters.

Also probably some of the limitations on contracting, that we would have some increased authorities over the renewal of contracts or limitations.

Senator **SEYMOUR**. Thank you, Mr. Underwood.

Now, Mr. Brennan, you just stated that this measure would not increase your authority or your interests, or work to increase your interests—the bill. Is that correct?

Mr. **BRENNAN**. That is my understanding of the bill, yes, sir.

Senator **SEYMOUR**. Let me ask, then, sir, how would you—what did you mean when you said that this measure would consider fish and wildlife purposes, you said, up front? What did you mean by that?

That sounds different than what they are under existing law. Is it?

Mr. **BRENNAN**. Senator, my understanding of the import of the legislation is that it would make clear what I believe is the Bureau of Reclamation's current practice of ensuring that among various impacts that a project might entail fish and wildlife related impacts are, indeed, factored into the planning process.

Senator **SEYMOUR**. Yes, I understand that, but you said up front. That sounds different than what it is today, is that not true?

Mr. **Brennan**. Senator, I do not believe so. In our work with Commissioner Underwood's office I think we have shared a mutual opinion that in considering project planning activities, or project development activities, one should identify the scope of the impacts that a project might cause.

Senator **Seymour**. Well, let me refer to the bill, all right? Page 4, lines 3 through 6: "The Secretary"—referring to the Secretary of Interior—"shall not enter"—shall not—that is strong language, pretty self-explanatory—"enter into any contract to sell or deliver water from Central Valley Project on any basis or for any purpose other than fish and wildlife."

Does that change in any way existing law relative to fish and wildlife interest?

Mr. **Brennan**. It does change existing law, Senator. It does not change the scope of our authorities.

Senator **Seymour**. I said interest as well.

Mr. **Brennan**. And I stand corrected, Senator. To the extent that the limitations on contracting authority are as set out in section 4, it would indeed affect fish and wildlife interests in the departmental and water planning process.

Senator **Seymour**. Is that what you meant when you said "up front"?

Mr. **Brennan**. No, sir. I was referring, instead, to the express recognition and statement that fish and wildlife and habitat activities would be considered among the project purposes of the CVP.

Senator **Seymour**. That is different than it is today?

Mr. **Brennan**. I believe it would codify, if enacted, and it would clarify what I believe is the Commissioner's and the Bureau's current practice, sir. I might add the Fish and Wildlife Coordination Act, among other statutory authorities, does provide express statutory obligations that fish and wildlife-type impacts be considered in the planning process as well.

Senator **Seymour**. You are talking about—and I hear you mention equitable treatment. That sounds like "equal to everybody else." Is that what you mean by that? That is equal to people, equal to flood control protection, equal to agriculture? Is that what you mean by "equitable treatment"?

Mr. **Brennan**. Senator, what I mean by "equitable treatment" is that it is identified as a factor that should be considered in the planning process and given the weight that the value, either societal or otherwise, placed upon the specific resource deserves.

Whether that be—obviously, I would believe it would vary on a case-by-case basis, and I would hesitate to suggest that—and I did not mean to suggest that you would get into the situation where every particular aspect of a CVP activity had to have an equal share in the ultimate decision, because the facts may not present that requirement.

Senator **Seymour**. Well, the basic thrust of the bill says the Secretary of Interior cannot sell or deliver one drop of water for any purpose other than fish and wildlife before these—and then it goes on to set forth these six requirements. Does that not take fish and wildlife and say that it is more important, or elevate it to a standard higher than any other purpose? That is what it seems.

Mr. **Brennan**. Senator, it does direct the Secretary to address fish and wildlife impacts resulting from CVP activities.

Senator **Seymour**. Well, why does it not then say fish and wildlife, instead of exclude everybody but?

Mr. **Brennan**. I am sorry, I did not follow your question.

Senator **Seymour**. It says "The Secretary will not deliver or sell on any basis and for any purpose"—meaning any purpose that is agriculture, that is recreation, that is urban, that is industrial—for any other purpose, other than fish and wildlife.

So fish and wildlife gets theirs, but nobody else gets any of theirs until these six requirements are met. That sounds to me like that is not even equitable. That sounds to me like we have got one class, one user of water, that comes before any other. Do you disagree?

Mr. **Brennan**. No, Senator. I believe that is the intent of the bill. I believe the intent of the bill is to address a historic failure to balance the fish and wildlife impacts in CVP planning, and it is intended to restore that sense of balance.

Senator **Seymour**. Okay, restore a sense of balance gets me to another question, Mr. Brennan. When the chairman was questioning you with regard to the damage caused to species as a result of the CVP project, I think you properly answered by saying well, I do not know what percentage of the problem is created by the CVP. Because we have no data, I assume, to document that. Is that really why you answered this question the way you did?

Mr. **Brennan**. That is correct to the best of my understanding, Senator.

Senator **Seymour**. Well then, let me ask you, what are those other reasons that would make up the percentage?

Mr. **Brennan**. I think the other reasons are basically those that we have heard raised earlier today—associated development.

Senator **Seymour**. Associated development?

Mr. **Brennan**. Associated development resulting from CVP activities, in addition to direct CVP impacts themselves—residential, agricultural, and other development—some of which has been served, some of which has been generated as a result of the State water project.

There is no question that there are a broad variety of resource development activities that have taken place within the Central Valley within the area served by the Central Valley Project, each of which one would expect has played some contributing role to the resulting impacts on fish and wildlife resources.

Senator **Seymour**. Do you think it is fair and equitable, therefore, that with all of those other impacts on the decline in species that we ought to single just one out and lay the entire cost and burden on the back of that one? Is that equitable and fair?

Mr. **Brennan**. Senator, I think that I would say that it is equitable and fair to ensure that projects bear the environmental costs, if you will, of their activities.

To the extent—I do not believe it would be appropriate to single out any one activity and impose the full universe of environmental obligations upon that one activity that it might not be responsible for. I am not in a position to give you a suggestion as to how to allocate them, however.

Senator **Seymour**. Thank you, Mr. Brennan.

Mr. Brennan, on page 4 of your statement you talk about the Central Valley Project Restoration Trust and support of it, and then you finish in the bottom six lines of paragraph 3, by saying "Prohibiting the Secretary from making expenditures from the fund until the State of California certifies its commitment to implement State actions for the upper Sacramento River should not be included." That is what you say, and then you go on to say, "because it might unnecessarily hinder progress on equally important matters that do not relate."

So what you are saying there is, do not shut off our use of the Fund, waiting on the State of California to commit to implement certain State actions for the Upper Sacramento River. Is that a fair statement?

Mr. BRENNAN. In essence, yes, sir.

Senator SEYMOUR. I can understand that, and if I am in your shoes, I think I would ask for the same thing. But you see, what this bill does, Mr. Brennan, it says all the other users of water, other than you, out of the CVP project, shall in fact wait—they all shall wait until all six of these items set forth are complied with, and when asking Mr. Underwood how long he thought it might take those items to be completed, and therefore approved, his answer was indeterminable. Do you think that is fair?

Mr. BRENNAN. With respect to the curtailment of the contracting activities?

Senator SEYMOUR. Yes, sir.

Mr. BRENNAN. Senator, I do not know.

Senator SEYMOUR. Thank you.

Mr. Sanderson—on page 6 of your statement, Mr. Sanderson, you talk about environmental restoration and you talk about recognizing the need for ecological restoration efforts, et cetera, and then you talk about the fact that you commented on the Bureau's 1989 proposal to market water through new contracts.

You stated "It would be difficult to determine how much CVP firm supply exists that can be made available for new contracts until the appropriate flows necessary," et cetera.

Now, I assume from your statement that you said that in 1989. Is that right?

Mr. SANDERSON. Late 1989 or mid-1990, I am not quite certain, but that was the context of their original proposal.

Senator SEYMOUR. Then you went on to say that the Bureau withdrew the proposal pending completion of the Bay/Delta water quality hearings.

Mr. SANDERSON. That is correct.

Senator SEYMOUR. My concern, Mr. Sanderson, with this bill is how long these things will take—those six requirements that are set forth here. How long? Can you give me some idea, Mr. Sanderson, how long the Bay/Delta water quality issue has been before us?

Mr. SANDERSON. It has obviously been a point of a great deal of interest and concern to the citizens of the State of California over the past decade——

Senator SEYMOUR. For the past decade, sir?

Mr. SANDERSON. And I think that it is also fair to note that during that past decade there has been a great deal of consensus and agency working together on it. At the same time, to agree with the Bureau to allocate water, of which they are not certain of the total amount or the total need, would be inappropriate while these others are going on.

It would not take any water away from the current contracts. It would simply not allow them to allocate that current water which may be in reserve until such time as all the data is available.

Senator SEYMOUR. I understand that, and that sounds altogether reasonable, Mr. Sanderson. The thing that concerns me is time, and when you are holding the trigger, and you will under this bill, I wonder how long—how many years it will take you to pull the trigger so that other users of water can get into new contracts. Do you have any idea or estimate of how many years it might take to comply with those six requirements?

Mr. SANDERSON. I believe that if, in fact, the group of people that that points out, particularly with the State and local efforts involved, that it could be expedited appreciably since there would be a piece of legislation which would recognize that each of these groups must work together in an institutional forum.

Senator SEYMOUR. Even though only one component of it, Mr. Sanderson, deals with the Bay/Delta water quality issue, and that has been going on for a decade—just that one—do you think that it could be wrapped up quickly?

Mr. SANDERSON. Senator, I might point out that 20 years ago we did not have a Clean Water Act. If we look at the Nation's waters today, we hardly see a recognition of where we were 20 years ago.

My same feeling is true of this piece of legislation. If, in fact, this is institutionalized and it is put together in a working arrangement with the Governor of California in the lead on most of these issues, I believe that it will be done and institutionalized very quickly.

Senator BRADLEY. Senator Seymour, I wanted to remind you we have three other panels, and the last panel has come a long way.

Senator SEYMOUR. And certainly I want to accommodate them, but I would like to just ask one more question of Mr. Sanderson if I could, Mr. Chairman, since he holds the trigger here in accordance with the bill.

Would you care to estimate for the record, with everybody cooperating together, how long it might take to in fact conclude what is required under the bill, pages 4, 5, 6 and 7 under section 4?

Mr. SANDERSON. Yes, I think that I can give you a general estimate of less than 2 years, but if I may I would like to provide my information to the record when I go back and look at each portion of it.

[The information follows:]

U.S. ENVIRONMENTAL PROTECTION AGENCY,
OFFICE OF ENFORCEMENT,
Washington, DC, May 21, 1991.

Hon. JOHN SEYMOUR,
U.S. Senate, Washington, DC.

DEAR SENATOR SEYMOUR: After my testimony of May 8, 1991, before the Senate Subcommittee on Water and Power regarding S. 484 (the Central Valley Improvement Act), you asked me to estimate the time required to comply with the bill's Section 4 requirements. This letter responds to your request.

The amount of time it would take to meet the requirements set forth in Section 4, if everyone worked together, would be approximately two to three years. This estimation is based on a paragraph by paragraph analysis of Section 4, which is summarized below, and coordination with the Environmental Protection Agency's regional office in San Francisco.

> The requirement that the provisions of subsections 6(b), (c), (d), and (e) addressing fish and wildlife restoration be met should be able to be accomplished within three years. The bill mandates that 6(d) and (e) take no more than one and two years, respectively, and this information may be necessary to complete 6(c).
>
> The requirement that the ongoing review by the California State Water Resources Control Board's water quality standards for the San Francisco Bay/Sacramento San Joaquin Delta Estuary be concluded and approved by EPA should be completed within the same time frame.
>
> > The current schedule for conclusion of the Board's review is 1992. Pursuant to the requirements of the Clean Water Act the following events must occur within the given time table: (1) the state submit its new standards to EPA within 30 days of state adoption; (2) EPA must formally approve the revisions within 60 days or disapprove them within 90 days; and (3) if disapproved and the state does not make the necessary changes within another 90 days, EPA must "promptly" initiate promulgation of federal standards that supersede the submitted state standards. Given these requirements, I believe that, with all parties working together, this requirement could be met within one and one half to two years.
>
> The final requirement of Section 4(a) (3) (which states "at least 120 days have passed since the Secretary of Interior provided a report to Congress explaining the obligations of the Central Valley Project (CVP) with regard to achieving Bay/Delta water quality standards and the impact of such obligations, if any, on CVP operations, supplies, and commitments") should also be able to be completed within two years.

This analysis leads me to believe that all requirements could be met within three years and, depending on the level of cooperation, in less than two years. I will be submitting this information for incorporation into the record when the transcript of the hearing is made available to my office for review.

Your staff may contact Amy Lucas (382-5200) if you desire additional information from the agency regarding its position on S. 484.

Sincerely yours,

RICHARD E. SANDERSON,
Director, Office of Federal Activities.

Senator SEYMOUR. Thank you, Mr. Sanderson. Thank you, Mr. Chairman.

Senator BRADLEY. Thank you very much, Senator Seymour. I was particularly interested to hear Mr. Underwood state that he believed that this bill gave the Bureau added authority, and I am sure, as I said in my opening statement, that we can clarify these things by making sure that we impose no conditions on these projects, so that water rights held by the Bureau would be subject to California State law; let them decide. Anything California decides would apply to the rights under the Bureau. I think that is one way we can make sure that the next time that question is asked it would not be quite as clear, if you get what I mean.

But of course I want to do that to accommodate the Senator from California, as well, because I do think California law should be the dominant thing here. And I think that water rights held by the CVP should ultimately be subject to California water law, and should be accorded the same rights as the California State project, so we will work that out, I am sure.

I would like now to move to the next panel, and I would like to thank all of you very much for your testimony.

Now we have Mr. Benjamin Haddad, who is director of the California Governor's Office.

Welcome to the subcommittee. It is good to see you again, Mr. Haddad, and welcome back to familiar territory, and I am anxiously awaiting your testimony.

STATEMENT OF BENJAMIN HADDAD, DIRECTOR, CALIFORNIA GOVERNOR'S OFFICE, ACCOMPANIED BY BOB POTTER, DEPUTY DIRECTOR OF WATER RESOURCES, STATE OF CALIFORNIA

Mr. **Haddad**. Thank you for affording Governor Wilson the opportunity to address S. 484 today, by way of a letter to you. I apologize for our tardiness in producing the letter to the committee, and I will be happy to read Governor Wilson's remarks in full, or if you prefer, I will read excerpts from the letter in the interests of time, and ask that the full letter be submitted for the record.

Senator **Bradley**. I would suggest that you read excerpts, and the whole letter will be submitted to the record.

Mr. **Haddad** [reading].

> Dear Senator Bradley. Regrettably, I cannot attend your hearing in Washington this week on S. 484. In addition, Secretary Douglas Wheeler is testifying at his confirmation hearing today and David Kennedy had a longstanding commitment that could not be changed.
>
> What we are deciding a bill of this nature is not just the flow of water, but the economic as well as the environmental future of California. We must also examine the ramifications of this measure on agricultural communities and the people and businesses they support. When we make major changes in a system as extensive and pervasive as the CVP, we need to agree on a long-term plan to ensure that we do not sacrifice one industry—one way of life—for another.
>
> Recently there has been considerable progress made in resolving some of the problems relating to the CVP through cooperation and consensus. These include the coordinated operating agreement that deals with joint operation of the CVP and the State Water Project, the Suisun Marsh Resource Conservation Agreement that committed the CVP to major planning and facilities providing adequate water quality for the Marsh, and the Upper Sacramento River Fishery Restoration Plan that sets forth many strategies to restore and enhance fisheries and riparian habitat in the river. In addition, the State has established by statute the San Joaquin River Management Advisory Council to deal with the complex and interrelated uses of the San Joaquin River Basin.
>
> One important lesson we have learned in California is that efforts to resolve water problems that do not have consensual solutions have not worked. Instead they have resulted in a stalemate. Where parties have managed to reach consensus, we have made progress. Compromises have been made in which all parties have felt that they have gained from the process. Such compromises are possible and must be pursued as a far more desirable alternative to continued stalemate.
>
> We are striving to develop a long-term water plan to meet the diverse needs of California. The Central Valley Project is integral to the overall health of California's resources and economy. The continuing drought serves as a painful reminder of how critical water is to all California. I am very proud of the level of determination and cooperation that all Californians are exhibiting during the drought. It is that same level of commitment that I intend to harness to address our long-term water supply needs.
>
> With regard to S. 484, there are a number of provisions generally supported by all interests that are worthy of further development. There are others that are likely to be counterproductive and potentially disruptive of the State's long-term planning efforts.
>
> We must provide more water for wildlife refuges. I also support well thought-out plans and solutions such as those proposed in the Upper Sacramento River Report. The concept of a trust fund to purchase land, and possibly water, and to carry out other activities that would benefit fish and wildlife is certainly an idea that has merit.
>
> I support the implementation of improved water conservation measures. And we support a study of integrating the State Water Project and the Central Valley Project. However, as Secretary Wheeler said at your Los Angeles hearing, we must

oppose provisions that limit renewal of reclamation contracts to one year for a host of reasons. Year-to-year renewals would have significant negative ramifications on agriculture and the communities that are supported by agricultural production, as well as fish and wildlife protection and water quality. Renewals are already subject to environmental protection statutes. We are committed to finding ways to provide greater protection with the context of long-term contracts.

In summary, I support efforts to restore fish and wildlife in the Central Valley. I support efforts to remove impediments to full USBR participation in these efforts. However, I cannot support measures which threaten the viability of California's agricultural economy. I cannot support measures that unilaterally challenge the State's hard-earned right to impose water conditions on Federal projects.

I believe progress on restoring Central Valley fish and wildlife can best be achieved by grassroots consensus-building efforts. We should explore ways to encourage developments in these areas that focus on incentives rather than punishment, and I welcome the opportunity to work with Congress to develop a bill that embodies these concepts.

Sincerely, Pete Wilson.

[The letter from Governor Wilson follows:]

STATE OF CALIFORNIA,
OFFICE OF THE GOVERNOR,
May 8, 1991.

Hon. BILL BRADLEY,
Chairman, Senate Subcommittee on Water and Power, Washington, DC.

DEAR SENATOR BRADLEY: Regrettably, I cannot attend your hearing in Washington this week on S. 484. In addition, Secretary Douglas Wheeler is testifying at his confirmation hearing today and David Kennedy had a long-standing commitment that could not be changed. However, I have asked Ben Haddad, Director of my Washington office and a member of my senior staff, to present this letter to your committee. He will be assisted by Robert Potter, Deputy Director of the Department of Water Resources. I look forward to working with you when your committee meets here in California toward the end of the month.

S. 484 presents an ambitious program to resolve concerns relating to the Central Valley Project (CVP) and its place in California's future. I agree with you that the CVP should do more to restore fish and wildlife affected by its operations and that the CVP should operate more efficiently as it allocates water.

What we are deciding in a bill of this nature, however, is not just the flow of water, but the economic as well as the environmental future of California. We must also examine the ramifications of this measure on agricultural communities and the people and businesses they support. When we make major changes in a system as extensive and pervasive as the CVP, we need to agree on a long term plan to ensure that we do not sacrifice one industry—one way of life—for another.

California is a state of farmers and farm workers, feed store owners and their suppliers and all other families and businesses that depend on the farmer, southern and northern metropolitan and industrial users that depend upon the CVP and other water projects for their drinking water and for their livelihoods, those who rely upon the waterways of the state for commercial and recreational fishing, and I am the trustee of our most valuable and threatened fish and wildlife resources that depend upon the CVP for survival. As Governor of all of California, I must oppose any efforts that will unfairly sacrifice one interest at the expense of another in a needlessly coercive or punitive fashion. In short, the Congress, the Administration, and the State must craft a solution that provides for the needs of fish and wildlife in a manner that does not destroy industry and our quality of life.

Cooperation, not coercion, is how we will make progress in solving the water wars. Recently, there has been considerable progress made in resolving some of the problems relating to the CVP through cooperation and consensus. These include the Coordinated Operating Agreement that deals with joint operation of the CVP and the State Water Project, the Suisun Marsh Resource Conservation Agreement that committed the CVP to major planning and facilities providing adequate water quality for the Marsh, and the Upper Sacramento River Fishery Restoration Plan that sets forth many strategies to restore and enhance fisheries and riparian habitat in the river. In addition, the state has established by statute the San Joaquin River Management Advisory Council to deal with the complex and interrelated uses of the San Joaquin River Basin.

One important lesson we have learned in California is that efforts to resolve water problems that do not have consensual solutions have not worked. Instead they have resulted in a stalemate. Where parties have managed to reach consensus, we have made progress. Compromises have been made in which all parties have felt that they have gained from the process. Such compromises are possible and must be pursued as a far more desirable alternative to continued stalemate.

Developing cooperation and consensus takes time. Solutions require significant commitments by each party to educating the others, being willing to listen and be educated, and making a concerted effort to find solutions that are creative and viewed as positive by all parties.

I am very encouraged by recent meetings among the three basic interests that are affected by water allocation actions—agriculture, urban users, and environmental groups. My senior staff has met with these interests and we will continue to meet with them and others to develop a long-term plan through an inclusive, not exclusive, process not just for the CVP but for California as a whole. Any federal legislation should strengthen, not weaken, these efforts.

We are striving to develop a long-term water plan to meet the diverse needs of California. The Central Valley Project is integral to the overall health of California's resources and economy. The continuing drought serves as a painful reminder of how critical water is to all California. I am very proud of the level of determination and cooperation that all Californians are exhibiting during the drought. It is that same level of commitment that I intend to harness to address our long-term water supply needs.

With regard to S. 484, there are a number of provisions generally supported by all interests that are worthy of further development. There are others that are likely to be counterproductive and potentially disruptive of the State8s long-term planning efforts.

We must provide more water for wildlife refuges. These refuges are a vital resource for the state and the nation. I also support well thought-out plans and solutions such as those proposed in the Upper Sacramento River Report. While the programs proposed involve significant expenditures of money, the United States Bureau of Reclamation (USBR) contractors generally favor the idea and are willing to commit to appropriate cost sharing.

The concept of a trust fund to purchase land, and possibly water, and to carry out other activities that would benefit fish and wildlife is certainly an idea that has merit. We need to review carefully the operation and funding of such a program so that its operations are well thought out and funding is fairly distributed.

I support the implementation of improved water conservation measures. Water conservation plays an important role in meeting our current water needs and will help us meet our future water supply projections.

We support a study of integrating the State Water Project and the Central Valley Project. The Department of Water Resources has considered this question in the past, and cautions that integration of these two systems involves extremely complex technical, economic, legal and policy issues that will take considerable study and effort to identify and resolve.

We encourage efforts to increase the flexibility and authority of the CVP so that it can participate in water banking and transfer programs, and in activities that will benefit fish and wildlife and other beneficial uses. We welcome measures that will promote water banking and transfers. I must caution you that many Californians have been suspicious of these ideas in the abstract, but the recent success of our Emergency Water Bank should dispel many of the old fears.

However, as Secretary Wheeler said at your Los Angeles hearing, we must oppose provisions that limit renewal of reclamation contracts to one year for a host of reasons. Year-to-year renewals would have significant negative ramifications on agriculture and the communities that are supported by agricultural production, as well as fish and wildlife protection and water quality. Renewals are already subject to environmental protection statutes. We are committed to finding ways to provide greater protection within the context of long-term contracts.

In summary, I support efforts to restore fish and wildlife in the Central Valley. I support efforts to remove impediments to full USBR participation in these efforts. However, I cannot support measures which threaten the viability of California's agricultural economy. I cannot support measures that unilaterally challenge the State's hard earned right to impose water rights conditions on federal projects. I believe progress on restoring Central Valley fish and wildlife can best be achieved by grass-roots consensus-building efforts. We should explore ways to encourage developments in these areas that focus on incentives rather than punishment, and I welcome the opportunity to work with Congress to develop a bill that embodies these concepts.

Sincerely,

PETE WILSON, *Governor*

Senator **Bradley**. Thank you very much, Mr. Haddad, for the testimony, and I know that you are accompanied by Mr. Potter, so that we could maybe ask a few questions here. And tell the Governor that I appreciate his willingness to submit testimony to the hearing, and hope to see him when we have our hearing in California.

Mr. **Haddad**. I will, Mr. Chairman. He does look forward to seeing you in California later this month.

Senator **Bradley**. Let me just ask a very broad question. And that is, what do you think are the most important things the Bureau of Reclamation could do to meet California's long-term water needs?

Mr. **Potter**. I think it is fair to say the Bureau is an important component of California's water needs, but if you look at where growth is occurring, most of it is occurring in the State Water Project service area, and I feel that the gun really is much more focused on us in terms of meeting future needs, and I think the COA was a major step forward to provide a surety to our operations, and that we now know that we can count on the Federal Government as a partner in meeting environmental commitments in the delta.

But really when it comes to meeting additional needs in California, most of the population growth is occurring in the State Water Project service area, or in the bay area, which is served by both projects.

Senator **Bradley**. And how does the State Water Bank work, that has been instituted in the midst of this drought?

Mr. **Potter**. The Emergency Drought Water Bank basically was an arrangement wherein the Department negotiated with potential water purchasers, and arrived at contracts wherein they would pay for water that the Department then bought from three essential sources. We bought water by paying farmers to fallow their land, not irrigate, in the 1991 irrigation season, thereby making water available. And we bought water by paying people to pump more from their wells. And the third source, which was important, but narrow in opportunity, was that there was a chance to buy some water from surplus storage in surface reservoirs.

So we bought from three sources, and we will deliver over the 1991 season to all of those people who participated in the bank by financially underwriting it. To be sure that we had closure, the State Water Project stands behind the bank. In the end, if there is water that is not allocated to purchasers, the State Water Project will pay the difference.

Senator **Bradley**. And what was the average cost of that water?

Mr. **Potter**. We paid for water on the basis of $125 an acre foot, as our expected value in the drought condition. There were other associated costs, costs of administering, some water is lost in transporting it through the delta, and there were some differences of opinion as to how much will actually be produced.

We think that the water will be delivered to the delta at a price of about $175 an acre foot to that the purchasers got to add wheeling costs, delivery costs.

Senator **Bradley**. And the actual sellers were whom?

Mr. **Potter**. We purchased over half of the water by fallowing agricultural lands, probably——

Senator **Bradley**. But they were users of the State water system?

Mr. **Potter**. No. Most of the fallowing actually occurred in the Sacramento/San Joaquin Delta, and probably 90 percent of it were riparian holders. So they were riparian water rights holders in delta system, and the ground water component, most of that is coming out of the Sacramento and Yuba rivers. The surface water we purchased was, most of it was water in storage at Bullard's Bar reservoir on the Yuba river.

Senator **Bradley**. Would it help you if CVP users could more readily market their water?

Mr. **Potter**. The situation in California this year, the specific situation this year was such that the CVP contractors, that is people who came in and bought their water supply from the CVP, only had a 25 percent supply. That meant that there was not much interest on their part. On the other hand, there were the water contract people who held water rights contracts with the Central Valley Project. People that were on the river before the Federal Government got there received a 75 percent supply, and there was substantial interest there in participating in the bank. It did take us a while to work our way through the institutional impediments, although there are instances where we are buying from within the CVP service area.

Senator **Bradley**. In order to maximize the potential flexibility for the State, both in terms of the bank and in terms of allocation, would it be helpful for us to explicitly allow the movement of water out of the valley, from the Central Valley Project?

Mr. **Potter**. I think that it is clear that if we are going to market water from that source, there has to be something that is understood. Most of the pressures in this drought were coming from Southern California, which is outside the CVP service area. The city of San Francisco is also in serious need, and they are not within the CVP service area.

Senator **Bradley**. So the answer is yes?

Mr. **Potter**. The answer is yes.

Senator **Bradley**. Would it help if we were explicit that holders of water rights, CVP water rights, would come under State law, specifically, and that the laws governing the use of the State water rights would apply to those who hold the Federal water rights?

Mr. **Potter**. That is fairly technical, and I do not feel real comfortable answering it. One of the things that makes me nervous about provisions in that area is that I feel rather strongly that California does have the authority to administer all water rights in the State, and I would not want something in this legislation that implied that the State did not have that right going in.

Senator **Bradley**. But in terms of making what you just said absolutely explicit, you would have no objection to that?

Mr. **Potter**. No.

Senator **Bradley**. Let me ask you, also, how do you think that the public trust doctrine affects CVP water?

Mr. **Potter**. Well, this is, I guess at this point I would have to remind you that I am not a lawyer. I am a civil engineer, and a water manager, but our perception at DWR of the public trust doctrine is that it basically applies to anybody's water operation in California at any point in time, and that if there is a legitimate public trust issue that can be brought, you are subject to it.

Senator BRADLEY. Thank you very much.

Senator Seymour.

Mr. SEYMOUR. Yes, just very quickly, Mr. Chairman, thank you.

Mr. Haddad and Mr. Potter, either one of you can answer this question. One of my concerns relative to this legislation are the six conditions that must be met before the Secretary of Interior is permitted to enter into any contract or agreement to sell or deliver water on any basis or for any purpose, until these six conditions are met.

The one condition I want to question you about is what has been ongoing relative to the review of the Sacramento Bay, San Francisco Bay/Sacramento/San Joaquin Delta statutory water quality standards, and as you know this California State Water Resources Control Board has been holding and reviews, etcetera. How long has that been going on?

Mr. POTTER. Well the Board issued its last major determination in the delta in 1978. They have had staff studies going ever since, and I believe that this current round of hearings started in the late eighties. I do not remember the date.

Senator SEYMOUR. Do you have any idea how much longer those hearings will go?

Mr. POTTER. I think the board has just issued the water quality aspect of the process now. They are moving into water operations, and I believe that their schedule calls for a decision in 1993.

Senator SEYMOUR. And would you care to give an opinion as to the likelihood or lack thereof of litigation following whatever decision it comes down to? Could you make that on a scale of 1 to 10?

Mr. POTTER. I would be surprised if there was not litigation after whatever the Board does. On the other hand I do not necessarily know that the litigation, I mean it would be up to a judge to decide whether everything was held in abeyance while the litigation proceeds.

Senator SEYMOUR. And the other thing that this bill would require is the State of California to determine the means of implementing the standard stat once you got agreed at all of these hearings, then implement a plan to insure those standards. How long might that take? And might that be subject to litigation as well?

Mr. POTTER. I would not guess at the number, and I am sure that is true. If I were to be consistent with what I have said about our own operations when people have asked us not to make management decisions because the process was ongoing, I would say water does not work that way. We have all got to move ahead and do the best job we can, that the process will never end, and when we finish this round we will start another one.

Senator SEYMOUR. Thank you very much, Mr. Chairman.

Senator BRADLEY. Thank you Senator Seymour. Before you go, I just wanted to just get your sense—as you know it is about 8 million acre feet in the CVP and 7 million are committed under existing contracts, and I thought we were keeping them free to try to deal with delta problems if and when we were able to decide what that should be.

I want to understand what California's interest is here, because I am not clear, based upon the record to date. And so would you recommend that we commit that 1 million acre feet to growers, or do you want us to keep it loose for possible use in the delta?

Mr. **Potter**. I would like to make two responses. First, I think the Bureau does have institutional obligations in front of it, including appropriation of an adequate EIS before they could mark it, and it seems to me those things need to be done. But in terms of preserving water for bay/delta, that does not fit my mental model of how the system works.

I mean the State Water Resources Control Board has got the right to set standards in the delta, to set these standards to protect the environment, and I think all of us have got to meet those standards when the Board sets them, and there has never been any misunderstanding on the part of our project contractors as to their obligation. We do not renegotiate contracts because the State board changes standards. We meet the standards.

Senator **Bradley**. I appreciate that very much. It is also important to note that the bill provides that all existing contracts, all 7 million acre feet can be renewed for up to 20 years, and it is the 1 million acre feet that would be subject to the provisions that Senator Seymour is concerned about, and perhaps legitimately.

But let me thank both of you for your testimony, and give the Governor our regards, and tell him we look forward to working with you.

Mr. **Haddad**. Thank you, Mr. Chairman.

Senator **Bradley**. Our next panel consists of Mr. Tom Graff, senior attorney, Environmental Defense Fund; Mr. William Howard, executive vice president, National Wildlife Federation; Leslie Friedman, director of public lands, California Nature Conservancy; and Nathaniel Bingham, Pacific Coast Federation of Fishermen's Associations.

Let me welcome you all very warmly to the panel, to the committee, and I hope that you will, if you could, make your statements brief. I apologize to all of the witnesses, but I am going to have to leave here shortly and we are going to have to see whether we will be able to get everybody on. I certainly would like to get everybody on, but let us push ahead and see if we can limit to 5 minutes your comments, if you could.

Mr. Graff.

STATEMENT OF THOMAS J. GRAFF, SENIOR ATTORNEY, ENVIRONMENTAL DEFENSE FUND, OAKLAND, CA

Mr. **Graff**. Thank you Mr. Chairman, Senator Seymour. I will try to be brief, understanding that my written testimony will be submitted for the record. I think the test here today is who is the best States-righter, and I am going to compete.

What I came to testify on is what I believe to be the case, namely that S. 484 is a bill which seeks to bring the Federal Government in large measure outside—having been outside the confines of State law and State practice, into the confines of State law and State practice, and let me say why I think I have some ability to speak on this subject.

I have been working for roughly 20 years on litigation dealing with the Federal-State relationship as it bears upon the Central Valley Project, including a couple of Supreme Court cases, and it came to be a little bit of a shock to hear Commissioner Underwood earlier today talk about the Bureau's great commitment to States' rights in light of the history of that litigation.

In four major decisions of the State Water Resources Control Board, going back to the Governorship of Governor Reagan through that of Governor Brown and then Governor Deukmejian, Attorneys General Younger, Deukmejian, and Vandecamp, we have stood with the State and in opposition to the Bureau and the Central Valley Project contractors on this very issue of States' rights.

We, in a series of environmentally sensitive State Water Resources Control Board decisions are seeking to bring the Bureau of Reclamation into some form of conformance with State policies on fish and wildlife, water quality, and other State policies the Bureau and the CVP contractors have stiffly resisted, and what I believe this bill in general would do is bring the Bureau of Reclamation by law into compliance with these State policies.

Now, I do think, having said that, that the Bureau of Reclamation has changed somewhat in the very recent past, and perhaps the fact that Commissioner Underwood was saying today that fish and wildlife is indeed a project purposes is a new view of the Bureau and that the Bureau is indeed ready to abide by States' rights in a way that it has not in the past, but I would be a whole lot more comfortable with law specifically passed by the Congress stating that, rather than simply the affirmation of the Commissioner.

Now, I did want to comment a little bit about some legislation also that the Congress has passed not so long ago—the coordinated operation agreement bill of 1986, H.R. 3113—and in that legislation Congress authorized the Bureau to sign a contract coordinating the CVP's operation with those of the State water project, and included in that legislation a requirement that the CVP live by the same water quality standards in the Bay/Delta Estuary as the SWP and other fresh water diverters.

I might say there have been questions earlier today about how much is the fish and wildlife obligation of the CVP versus the SWP and versus other users. That is an immensely complicated question, and the best minds of all kinds—project operators, environmentalists, fish and wildlife experts—are not going to be able to give you definitive answers.

I think one of the main reasons for the COA legislation was to try to come up with a compromise—the agreement first and then the legislation itself—to fairly allocate that responsibility, at least insofar as the bay/delta estuary is concerned, and I think that kind of rough calculation of how much is Federal obligation, how much is power user obligation, how much is private power obligation, perhaps, how much is State general fund, Federal Treasury, whatever, is something that can only be resolved politically, admittedly with information from others.

Now, I did want to get also into the subject of voluntary transfers. EDF, as you may know, has long been a proponent of voluntary transfers, and I do want to bring out that California has what amounts to being the best body of voluntary transfer legislation in the western States, and that that legislation has been the product of, in many cases, unanimous or near unanimous votes of the State legislature over the last dozen or so years with many sponsors from both political parties.

However, there is a big problem, and the earlier testimony I think does not solve that problem. There is a gaping hole in this construct of State law, and that is that we do not know if the Bureau of Reclamation is subject to that law, which was in many cases, as I indicated, passed unanimously by the State legislature.

The Bureau of Reclamation—I should say, the Department of the Interior has issued a general statement at the Federal level, at the Washington level, supporting voluntary transfers for the most part.

In a specific case involving the Lower Colorado River Basin Office they approved the 100,000 acre feet of transfer of conserved water from the Imperial Irrigation District to the Metropolitan Water District, something which EDF strongly supported. In fact the Bureau of Reclamation Mid-Pacific Region has strongly encouraged voluntary transfers in Nevada in the Truckee/Carson situation which the Congress and this committee worked so hard on last year, but in the Mid-Pacific Region California context we do not know, to be honest, what the Bureau of Reclamation policy is.

As I put it in my prepared remarks, it is shrouded in obscurity, and it seems to me that one major purpose of this legislation should be to lift that shroud and to clarify that the Bureau will, indeed, comply with State law in this very important respect.

Now, that is critically important, I would argue, for all the people of California that the Central Valley Project no longer will be simply limited to the traditional beneficiaries of the project but that it will also be available through water transfers to residents wherever the plumbing will take the water, and that means the 15 million people of Southern California, and that means the people of San Francisco and others served by the Hetch Hetchy Project. Coastal communities hardest hit by the drought and so forth, those customers, it seems to me, or those residents, should have the right to get at CVP water as well.

Finally—and I see the chairman leaning over—I do want to say a word or two about consensus. EDF has long been a strong supporter of consensus processes in California—the COA. We have worked with traditional adversaries like Westlands and MWD. We are currently very active in the consensus negotiations in the State. But consensus is only meaningful if we are moving forward toward CVP reform in the Federal context, and that is what we think this bill does.

Thank you.

[The prepared statement of Mr. Graff follows:]

PREPARED STATEMENT OF THOMAS J. GRAFF, SENIOR ATTORNEY, ENVIRONMENTAL DEFENSE FUND, OAKLAND, CA

Senator Bradley and Members of the Subcommittee: I appreciate your inviting me to testify before you for the second time on S. 484, Senator Bradley's bill to reform the Central Valley Project (CVP). In my previous testimony I praised the provisions in S. 484 which approve the voluntary transfer of CVP water by its traditional beneficiaries to others in the state who have a greater need for that water and who can afford to pay market rates to acquire the water they need.

In this testimony, I would like to amplify my views on this subject, with a particular focus on the relationship of these pro-water transfer provisions to state law and to state control over the allocation of California's waters.

I believe that my credentials to comment on this relationship are quite good. Over the last 20 years, I have participated in almost all of the major pieces of litigation which have explored the federal-state relationship as it bears upon the CVP, including the two decided by the U.S. Supreme Court. In both of these cases, *U.S.* v. *California*, 438 U.S. 645 (1978), and *Environmental Defense Fund* v. *East Bay Municipal Utility District*, 439 U.S. 211 (1978), I argued for the states' rights position in opposition to most of the same interest groups who are now attempting to convince this committee that S. 484 somehow contravenes states' rights. In the case of *U.S.* v. *California*, which arose out of the New Melones Dam controversy, EDF was the principal intervenor on behalf of the environment and of states' rights. There, the Supreme Court upheld state regulation of the CVP to the extent that the filling of the New Melones Reservoir was delayed for over five years beyond the time federal authorities had planned that it would be filled. In *EDF* v. *EBMUD*, the U.S. Supreme Court overturned a California Supreme Court ruling which had thrown out an EDF complaint regarding an unreasonable upstream diversion of water on the basis that it involved "federal water" and was thus beyond the reach of state law. The U.S. Supreme Court, led in both of these cases by then Justice (now Chief Justice) Rehnquist, extended the scope of state law over matters which the Bureau of Reclamation had previously believed to be solely within the scope of federal prerogatives, and thus promoted harmony and balance in the operation of federal and state water projects within California.

This too was the outcome of the most recent major piece of federal legislation which passed the Congress regarding the operation of the CVP, the Coordinated Operation Agreement bill of 1986 (H.R. 3113). In that legislation, Congress authorized the Bureau to sign a contract coordinating the CVP's operations with those of the State Water Project (SWP), and included in the legislation a delicate compromise, which I played some role in helping to craft. That compromise went a long way toward insuring that the CVP is and will be bound to live by the same water quality standards for protection of the San Francisco Bay/Delta estuary that bind the SWP and other freshwater diverters in the state.

It is therefore quite distressing for me to see old discredited arguments arise once again promoting the position that Congress should extend the scope of federal supremacy over the operations of the CVP and should reject the efforts made in S. 484 to harmonize still further the operations of the CVP with those of state and local projects and with state law.

Throughout the 1980s, even while the state bickered and divided on a series of proposals to build new conventional water projects, a bi-partisan consensus developed on the merits of voluntary transfers as a means to promote the more efficient allocation of California's water resources. Numerous pieces of legislation were passed by the State Legislature, usually by unanimous or near-unanimous votes, which promoted these transfers. Sponsored by a wide variety of authors from both parties, including Assemblymen Katz, Kelley, Filante, Costa, Isenberg, and Baker and Senators Vuich, Stirling and Bergeson, this legislation created a body of state law favoring water transfers which is the most comprehensive in the western states. Unfortunately, however, there is a gaping hole in the operation of the bills signed over the last decade by both Governors Brown and Deukmejian. That hole involves the seven or eight million acre feet under the control of the Bureau of Reclamation's Mid-Pacific Region.

Unlike the Lower Colorado River Basin regional office, which readily approved the voluntary transfer of approximately 100,000 acre feet of water from the Imperial Irrigation District to the Metropolitan Water District of Southern California (MWD) in 1989, the Mid-Pacific Region's position on voluntary water transfers remains shrouded in obscurity. Despite the overwhelming support for voluntary transfers in state law, and the general support given transfers by the edicts of higher levels of the Department of the Interior (see "Principals Governing Voluntary Water Transactions That Involve or Affect Facilities Owned or Operated by the Department of the Interior," December 16, 1988; and "Criteria and Guidance," March 16, 1989), the Mid-Pacific Region appears to take the position that CVP water may not be freely transferred even within the confines of the traditional CVP service area and may not be transferred at all outside those boundaries, except perhaps to an isolated area like the Pleasant Valley Water District, where powerful sponsors, such as the Standard Oil Company and Congressman Tony Coelho, have been involved.

One practical effect of this position, which of course directly contravenes state law, is that the fifteen million people of southern California are deprived of any opportunity to acquire water which a CVP contractor or a grower within a CVP district may decide it wants to lease or sell. Equally constrained are the customers of the Hetch Hetchy Project in northern California and other coastal communities hardest hit by the current California drought.

The CVP contractors, who have traditionally promoted federal supremacy over states' rights, naturally favor this set of circumstances. They continue to receive massive federal taxpayer subsidies (and expect them to be renewed for another forty years and longer) and as a group appear to have no interest in sharing that largesse with other areas of the state, no matter how great those areas' need or ability to pay may be.

In recent years, in other western states as diverse as Arizona, North Dakota, Utah, and Nevada, Congress has passed or is on the verge of passing legislation which expands the number of beneficiaries of Bureau projects, thereby recognizing and responding to the urbanization which is taking place in many of these states. This legislation has not been limited, however, to serving urban areas; it has provided as well for more equitable treatment of the environment and of the Native American communities of the affected states. These are objectives of S. 484 as well and they too are in complete harmony with California law. The only conclusion I therefore can draw, Mr. Chairman, is that the objections to your bill that are based on states' rights at best are contrived and at worst are simply subterfuge designed to maintain the status on behalf of the existing CVP beneficiaries.

Finally, Mr. Chairman, I would like to say a few words about consensus. As I noted in my testimony on March 18, S. 484 is a complex piece of legislation. It seeks a balance among the interests of many constituencies, some traditional, some new. From EDF's point-of-view, it offers a great starting point for rectifying the imbalance among those constituencies reflected in existing federal law and in the practices of the Bureau of Reclamation Mid-Pacific Region. Further, the improvement in federal law which it would bring is wholly consistent with state law as it now exists.

I must confess, however, as I am a realist with twenty years of experience in the water business, that the legislation need not pass exactly as it is now written to provide a substantial improvement in CVP operations. Certain elements are crucial: the CVP must be placed in a position where it can serve the whole state; it must serve the environment more equitably than it has in the past; and it must harmonize federal with state law approving voluntary transfers.

Without presuming to suggest what else in the Chairman's legislation might be negotiable from our point-of-view, however, let me conclude by saying that EDF has long been committed to working toward consensus outcomes wherever possible in promoting our objectives. I have already mentioned the COA bill. Other salient examples include our joint projects with Westlands Water District on agricultural drainage treatment funding, with MWD on hazardous waste source reduction and groundwater quality protection, and with the Department of Water and Power and others in seeking water for the city of Los Angeles to replace that which it would leave in the Mono Basin. We also are presently committing very substantial resources to the three-way negotiating process under way in California. Accordingly, let me state that we at EDF do stand ready to work with other interests, as well as with the bill's author and others in the Congress, to pass consensus CVP reform legislation if that is possible. But we are not willing, Mr. Chairman, to retreat from the path of CVP reform.

Thank you again for inviting me to testify.

Senator **Bradley**. Thank you very much, Mr. Graff.

Ms. Friedman.

STATEMENT OF LESLIE FRIEDMAN, DIRECTOR OF PUBLIC LANDS PROGRAMS, THE CALIFORNIA NATURE CONSERVANCY, SAN FRANCISCO, CA

Ms. **Friedman**. Mr. Chairman, Senator Burns, Senator Seymour, my name is Leslie Friedman. I am the director of public lands programs for the California Office of the Nature Conservancy.

Nature Conservancy is an international nonprofit conservation organization whose mission is primarily to protect plants, animals, natural communities, and the habitats they need to survive.

I have submitted a thorough testimony which I hope will be included in the record, and I would like to summarize my statement now.

The California Nature Conservancy has 90,000 members. Our national membership in the Nature Conservancy is about 600,000. The Conservancy has the largest nature preserve system in the world. We have about 1,600 nature preserves in the United States. About 47 of these are in California, and they protect some 500,000 acres.

We have already spent millions of dollars protecting imperiled habitats and restoring them in the Central Valley of California. We believe that given our expertise we can best serve this hearing by testifying to the ecological values of the Central Valley and the feasibility and urgency of restoring these habitats.

No natural landscape in California has been more altered by human activity than the Central Valley, especially the riparian forests and bottomlands of the five most decimated habitat types in California. Four of these are found in the Central Valley.

I have heard several people today speak to fisheries. There are many other communities that are also impacted. Riparian woodlands, for one, used to cover about 1 million acres in the Central Valley. They now, at best, have about 11 percent of that extent remaining, and only 1 percent of that is considered to be in high-quality condition.

Interior wetlands once covering 4 million acres have been reduced to less than 4 percent of original extent only, and very few of these are in high quality condition. Many are degraded by silt-laden run-off and pesticides. Even at this tiny remaining percentage, these habitats still support the greatest concentration of nesting waterfowl in the Pacific flyway. About 60 percent of the birds of the Pacific flyway nest in the Central Valley in the wintertime.

Perennial grasslands are another community that has been impacted. These grasslands used to cover roughly a quarter of the State. They are now down to less than one-tenth of 1 percent original distribution. This is a tremendous loss to biological diversity and species.

I would like to refer you to my written testimony and also some support documents that I have.* We have graphically represented the original distribution and remaining distribution of these communities, and there are fact sheets on each one of the communities I have mentioned.

Habitat loss we believe is important—we know is important, because it ultimately leads to the loss of natural diversity and extinction of species. Habitat loss is also important in that ecological services provided by natural communities are expensive to reproduce through technology and sometimes impossible. Some of these services include watershed protection, abatement of pollution, and moderation of climate.

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* Additional material submitted appears in the appendix. Copy of the Sacramento Bee has been retained in subcommittee files.

Extreme loss of habitat in the Central Valley has led to the unfortunate and very costly situation where every potential loss of habitat becomes a major issue. There is simply no land or water left that is not already spoken for. In this context, everyday activity such as bank stabilization, levee maintenance and water release schedules become flash points for major disagreement.

Sensible water-conservation programs and cost-saving measures are often not even proposed for fear that they will cause controversy. This gridlock is a direct result of pushing every significant Central Valley habitat type to the brink of extinction. There is simply no slack left in the system.

The Nature Conservancy and others have been protecting Central Valley habitats for years, yet we realize that we cannot do the job simply by protecting land. There simply is not enough of it left.

We recognize that restoration is one way to get around this. We believe that there is hope. We have to remember there is a long list of endangered species in California, especially in the Central Valley, but these species are not extinct yet. There is a lot that we can do to bring them back from the verge of extinction, but the window of opportunity is very narrow and is closing.

We believe habitat restoration is a laudable and practical strategy, but we must do it now. The benefits of the restoration are many. The restoration of a riparian forest, for example, increase habitat for endangered species, creates migration corridors——

Senator **BRADLEY**. Could you please wrap it up?

Ms. **FRIEDMAN**. There are lots of benefits of restoration. We know we can do it. There are two cases studies included in my written testimony which I would ask you to refer to that show we can successfully restore these habitats. The Nature Conservancy has forged partnerships with lots of State and Federal agencies, private entities such as Ducks Unlimited and the Irvine Corporation, to do restoration and habitat protection.

It is important also to note the State of California has come up with new initiatives to create a riparian habitat conservancy and a comprehensive wetlands plan. We think that this bill, S. 484, would significantly complement those activities.

[The prepared statement of Ms. Friedman follows:]

PREPARED STATEMENT OF LESLIE FRIEDMAN, DIRECTOR, PUBLIC LANDS PROGRAMS, THE CALIFORNIA NATURE CONSERVANCY, SAN FRANCISCO, CA

Mr. Chairman, members of the Subcommittee, I am Leslie Friedman, Director of Public Lands Programs for the California Nature Conservancy. We appreciate being invited to appear before you to discuss S. 484, the Central Valley Project Improvement Act.

The Nature Conservancy (TNC) is an international non-profit conservation organization founded in 1951. TNC has 575,000 members nationwide, 90,000 of whom reside in California. TNC's mission is to preserve plants, animals and natural communities that represent the diversity of life on Earth by protecting and restoring the lands and water they need to survive.

The Conservancy owns more than 1,200 preserves—the largest private system of nature sanctuaries in the world. The California Nature Conservancy has helped to protect over 500,000 acres in California. We currently manage 47 nature preserves comprised of over 325,000 acres. We have already spent millions of private dollars protecting and restoring the imperiled habitats of the Central Valley.

TNC believes we can best contribute to this hearing by discussing the biological values of the Central Valley and how they will be affected by this bill.

Early settlers described the Central Valley rivers and streams as containing fish so numerous one could "walk across a river on their backs". Extensive wetlands of the Tulare basin and the San Joaquin and Sacramento Valleys attracted migrating or winter resident waterfowl in huge numbers that "blackened the skies" and riparian forests had a "jungle-like appearance".

Less than 200 years ago the Central Valley was home to abundant wildlife including tule elk and grizzly bears. Today even the kangaroo rats, beetles and cuckoos are endangered species. In fact, no fewer than 55% of the threatened and endangered species in California depend on the wetlands and riverside woodlands of the Central Valley, and the San Joaquin Valley has the dubious distinction of supporting the largest number of federally endangered vertebrate species in the country.

No natural landscape of California has been so altered by human activity as the riparian forests and bottomlands of the Central Valley. Of the five most decimated habitat types in California, four—riparian woodland, interior wetlands, Central Valley vernal pools, and valley grasslands—occur in the Central Valley.

The following are brief descriptions of some of the Central Valley's unique natural resources and their status.

Rinarian Woodlands—Riparian forests are critical to the wildlife of the Central Valley. They provide food and shelter, as well as relief from the hot summer sun. They stabilize the river banks and slow the speed of flood waters. They provide habitat to a richer collection of terrestrial vertebrates than any other ecosystem in the State. In addition, the vegetation along the shore is critical to the quality of the aquatic habitat, and contributes significantly to maintaining healthy fisheries by providing shade, a source of food, and nutrients.

In the 1800's the great river systems of the Sacramento and San Joaquin Valleys supported nearly a million acres of riparian woodland. Today at most 11% remains of the habitat, and much of that has been severely degraded. Less than 1% of the Central Valley's riparian vegetation is in natural high quality condition, and this generally occurs as narrow strands of vegetation along rivers and streams. Few large tracts remain.

To make matters worse, the tiny percentage of remaining forest is highly fragmented, and may not, in the long run, prove viable. A wide variety of life depends on this remnant forest including such endangered species as Swainson's hawk, least Bell's vireo, western yellow-billed cuckoo, bank swallow, and the California hibiscus. Scientists agree it is questionable whether the remaining forest is sufficient to ensure the continued existence of these species.

Interior Wetlands—As many as four million acres of interior wetlands once occurred in the Central Valley. This vast area supported an unimaginable abundance and variety of wildlife: tule elk, pronghorn, mule deer, grizzly bears, wading birds, furbearers, reptiles, amphibians and huge numbers of breeding and wintering wildfowl. Today less than 4% remain, and these remnants are often degraded by pesticides and silt laden runoff.

Nevertheless, California's Central Valley is the most important wintering ground for migratory waterfowl in the entire United States. Some 10-12 million birds winter in or pass through the Central Valley each year as it is a key component of the Pacific flyway. Unfortunately, losses to conversion continue, and only a small number of acres have been acquired and protected.

Perennial Grasslands—Nearly a quarter of the state was once covered with perennial grasslands. Today a tiny fraction remains—perhaps only one tenth of one percent. This represents one of the greatest losses of indigenous natural diversity in America.

Spring-Run Chinook Salmon—The spring-run chinook salmon is a distinctive form of the chinook salmon that was once extremely abundant in California's Klamath, Sacramento, and San Joaquin River systems. Before the gold rush, every large tributary in the Central Valley supported a spring-run of chinook salmon. This chinook run formed the backbone of the commercial salmon fishery in California in the 1800s. Today, these runs are reduced to less than 5% of their historic numbers, with small populations left in smaller tributaries of the Sacramento River.

Valley Oaks—More than any other oak woodland type, the valley oak habitat has been degraded and lost. Valley oak woodlands, once miles wide, have been largely reduced to a scattering of giant, relict trees remaining on the immediate riverbanks and as shade trees around farmhouses and parks.

Habitat loss and resulting loss of biological diversity is becoming one of the leading political, social, economic and scientific issues of our times. Of particular concern is the fact that many of the habitats that have lost the most acreage are also habitats that are unusually rich in species. These habitats include valley riparian forests, wetlands, and perennial grasslands. Unfortunately, even the remnants of these habitats are not well protected. Some habitat types, like valley riparian forest and perennial grasslands, have less than 2% of their acreage within reserves.

Also extremely valuable are the "ecological services" provided by diverse natural communities. These services include protection of watersheds and floodplains, moderation of climate, abatement of water and air pollution, biological control of pest populations, and maintenance of habitat for wild pollinators of agricultural crops.

Maintaining ecological services through protection of natural ecosystems is very inexpensive compared to the technological alternatives. Technologies to control floods, abate pollution, and control pests are expensive, hazardous, and often ineffective. And there simply are no technological alternatives for moderating climate or improving disease resistance for crops.

Loss of habitat inevitably leads to loss of natural diversity and species. The most obvious value of natural diversity results from the material resources provided by certain species. Plant and animal species provide food, drink, fuel and energy, fabrics, medicines, building materials and industrial products.

Sliding Towards Extinction, a 1987 report commissioned by the California Nature Conservancy at the request of the California Senate Committee on Natural Resources and Wildlife, paints a disturbing picture of the state of California's natural heritage. The report states that "adding potentially threatened or endangered species to those already listed, we find a third of California's mammals, a quarter of the birds, a third of the reptiles and amphibian species, and 40 percent of the freshwater fish species, plus 12 percent of California's native plants are all imperiled if current trends continue. These statistics are greatly disturbing to scientists, resource managers and the public as a whole".

The extreme loss of habitat in the Central Valley has led to the very unfortunate and very costly situation where every potential loss of more habitat becomes an issue. There is simply no land or water left that is not in one way or another spoken for. In that context, sensible water conservation strategies, energy conservation programs, water release schedules and other everyday actions in the valley become flashpoints of disagreement. This is the direct result of pushing virtually every significant natural habitat type in the Central Valley to the brink of extinction. Every acre, in that context, becomes that last stand for some species.

Land preservation alone, although a vital component of an effective conservation strategy, cannot and will not remedy the situation in the Central Valley; there simply isn't enough of these habitats left to ensure the continuation of species that depend upon them. Nevertheless, we believe there is hope. Many imperiled habitats and species can be brought back from the verge of extinction through appropriate land conservation, resource management and habitat restoration.

We at the Conservancy believe that we have a narrow and rapidly closing window of opportunity to help reverse the slide towards extinction by aggressively pursuing habitat restoration and enhancement. Not only is the technology for many such undertakings now available, but threats to the remaining, beleaguered habitats of California's Central Valley increase by the day.

In order to illustrate the efficacy and feasibility of ecological restoration we would like to discuss two case studies.

FISHERIES RESTORATION: MILL CREEK CASE STUDY

Mill Creek is one of the two remaining tributaries to the Sacramento River that supports a wild race of spring-run salmon and steelhead. During dry years, the flow in Mill Creek is entirely diverted for irrigation uses on the valley floor. As a result, upstream migration of adults and downstream migration of juvenile salmon are impeded or entirely blocked during dry years.

Sufficient transportation flows are the limiting factor for fish passage in dry years. If adequate flow is present, fish will be attracted by the flow and migrate upstream to holding and spawning areas or downstream to the Sacramento River.

The importance of critical flow periods to these anadramous fisheries was addressed in California State Senate Bill 1086, the Upper Sacramento River Management Plan. Of the 22 projects included in the plan, a plan to ensure sufficient transportation flow in Mill Creek was considered one of the two most urgent.

Through a joint effort involving the California Department of Water Resources, the California Department of Fish and Game and The Nature Conservancy, a project was developed to pump ground water in exchange for an equivalent amount of water to remain in Mill Creek during critical migration periods.

In 1990 a test of this plan was conducted with remarkable success. Groundwater was pumped from two wells on The Nature Conservancy's Dye Creek Preserve to temporarily offset agricultural diversion obligations. This experimental shutdown of diversions boosted creek flows from 15 cubic feet per second to 150 cubic feet per second, enabling the salmon to move quickly up the river to upper stream areas where they can survive summer months.

Fish counts conducted during the 1980's indicated a population of no more than 200 fish in Mill Creek. Last year's count topped 900 fish. All parties involved agree that the project appears to be a huge success which may be replicated on other streams with degraded fisheries.

RIPARIAN FOREST RESTORATION

The California Nature Conservancy (CNC) has undertaken several riparian restoration projects in the Central Valley. CNC has made a programmatic commitment to research, develop and implement innovative restoration techniques, searching for the least expensive and most effective method of reintroducing riparian forest.

In California, The Nature Conservancy has worked with the State Department of Fish and Game, Bureau of Reclamation, Fish and Wildlife Service, Bureau of Land Management, Marine Corps and the Army Corps of Engineers in partnerships to protect and restore wetlands and riparian forests.

The Nature Conservancy has had excellent success restoring riparian forest habitat at three of its preserves along rivers of the Central Valley (the Kern River, Cosumnes River, and Kopta Slough on the Sacramento River). We have planted hundreds of acres of trees, an impressive 80-90% of which have become successfully established.

While it is, as yet, too early to say if current restoration efforts will reverse the slide towards extinction, the recent sighting of an endangered yellow-billed cuckoo on a four-year old restoration plot at The Nature Conservancy's Kern River Preserve has greatly encouraged us.

It is important, we believe, to note that the State of California has also proposed initiatives to preserve the state's forests, wetlands, rivers and wildlife. Components of these initiatives will have a complementary effect with the purposes of SB 484.

One of them is to provide $15 million over two years to a newly created Riparian Habitat Conservancy, whose purposes will be to acquire and restore riparian habitat, resolve land use conflicts in these areas, and assist in compatible development projects in partnership with other state agencies, local governments, and the private sector. The other proposal is for the California Resources Agency to develop a comprehensive wetlands conservation program. It will make recommendations to the Governor for establishment of a program which places California at the forefront of states which seek improved conservation of these critical resources.

We believe these initiatives represent a good faith effort by the State to do its share in helping to solve the problems in the Central Valley.

The Nature Conservancy believes the realization of the goals and proposed actions set forth specifically in Sections 6 and 7 of S. 484, the Central Valley Project Improvement Act, will be an important complement to existing and proposed state and private efforts to protect and restore the imperiled habitats of the Central Valley.

We strongly support the bill's stated intent to "protect, restore and enhance fish and wildlife and related habitat," and to "provide firm water supplies of suitable quality to maintain and improve wetland habitat on National Wildlife Refuges in the Central Valley".

We also believe that the Central Valley Project Restoration Trust and Central Valley Project Restoration Fund will provide a new, important and dependable source of much needed funding for habitat protection and restoration.

SOURCES

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Senator BRADLEY. Thank you very much for your testimony. Mr. Bingham.

STATEMENT OF NATHANIEL S. BINGHAM, PRESIDENT, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, MENDOCINO, CA

Mr. BINGHAM. Senator Bradley, Members of the committee, I want to thank you very much for the opportunity to appear before you this evening, and I know you have listened very patiently and asked some really hard questions of the panelists, and that is the way the process should be.

I am kind of raggedy because I am just after 7 days on my fishing boat and all night on the red-eye. You have my written testimony that I presented in Los Angeles, and you have my remarks in writing here for this evening, and so I am going to try to summarize them for you now.

I have listened to a lot of what was said today, and what keeps ticking in my mind is the San Joaquin River, and the fact that 30 years ago the Bureau dried that river out. There is a whole region where you can walk in the bed of the river at one time of the year, and it has been like that for fishermen. That is something we have had to live with.

We have seen the reduction of our opportunity to fish for all these years, and when we talk about balance and priorities we have been at the bottom of the heap for 30 years, and now the bill has come due, and we are paying it. We have been shut down by the fishery managers to protect the stocks.

The Pacific Fisheries Management Council made a decision, since the last time I spoke to you in March, relative to the salmon season. They took 45 days away from the Port of Bodega Bay, which had always had a full season. They left the north coast of California. The communities of Fort Bragg, Eureka, Crescent City, Brookings, Oregon, Gold Beach, Oregon, Coos Bay, Oregon were all totally closed, and this has been this way going on 4 years now. We have communities that are devastated.

So while my heart goes out to the farmers that are going to face the same kind of a thing—I hope this does not happen to the small farmer. They are our fellow food producers and we want to work with them. We want to see them survive, too. But we are not surviving. Fishermen told me, when I told them I was coming here to talk to you, hey, it is gone for us. We are almost history.

So tonight, I guess the message I have for you is that you do need to restore the balance, and we do believe this legislation will restore the balance. Give us a chance.

I have the honor tc serve on the Salmon Stamp Committee, and I want to tell you here tonight that we self-tax ourselves to pay for restoring salmon. We are trying to do our part. We have even gone so far as to provide funds for an environmental impact statement on a screen, an irrigation district screen to help the farmers solve their problem relative to the fishery. We put our money and our livelihoods on the line, and we would like to ask you to do that to help us restore the salmon.

I would like to beg the committee's indulgence now, since I have not read anything from my statement, to read into the record a poem that was written by an old man that fishes out of Shelter Cove, California. It is a remote port on the north coast of California. His boat is 25 feet long. He is 62 years old, and he does not think he is going to be able to fish any longer.

Chairman Richard Schwarz, after he went through the very painful process of voting for the worst fishing season in the history of the Pacific Coast wrote a letter to Cecil Andrus which is attached to my testimony, and I urge you to read it, and the back side of the letter is Barnacle Bill Duncan's poem, and Mr. Chairman, I beg the indulgence of the committee to be allowed to read it to you.

> The farmers get cheap water to grow cotton, hay and rice and then collect a subsidy that really makes it nice.
> They poison all the run-off, with selenium I am told and cry "It's only right," while they line their purse with gold.
> "We're helping the economy," the Agri-business booms, "if it wasn't for our cotton, you'd have no 'fruit of the looms.' "
> They drive around in their Cadillacs, their sons and daughters too, and claim the water rights are theirs, while the salmon runs are few.
> The salmon's not important, it's only a fish they say we can get all we want, from Canada and Norway.
> While the trollers put up millions, to try to save the run, we fight with all those Bureaucrats, and that really isn't fun.
> For too few public servants know what the name implies, for we are getting "serviced" while listening to their lies.
> We're trying our gol-darndest to keep those runs alive. We know that we will all be gone if the salmon don't survive.
> Now we're facing a bad year, like we've never seen before.
> I wonder: "Will the salmon be there, when the trollers are no more?"
> The farmers will get drought relief, and not even ply their craft but the poor damned salmon trollers are gonna get the shaft!!!

Thank you.

[The prepared statement of Mr. Bingham follows:]*

PREPARED STATEMENT OF NATHANIEL S. BINGHAM, PRESIDENT, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS MENDOCINO, CA

Senator Bradley and members of the Subcommittee, my name is Nat Bingham and I am president of the Pacific Coast Federation of Fishermen's Associations (PCFFA) which is made up of port-based organizations along the U.S. west coast. Although most of our membership is in California, PCFFA's associate member organizations include the United Fishermen of Alaska, the Washington Trollers Association, and Salmon for All in Oregon. I want to thank the Subcommittee for this opportunity to speak for the working men and women of the West Coast commercial fishing fleet in support of the absolutely vital legislation you are considering today, S. 484.

I am a commercial salmon fisherman. I operate my vessel, the *Ellot M* out of Fort Bragg, which is along California's north coast. In addition to fishing for a living for 25 years, I have served as PCFFA's president for the past eight years, as chair of the Salmon Advisory Subpanel to the federal Pacific Fishery Management Council—which regulates the ocean salmon fisheries harvesting stocks originating in the rivers of Oregon, Washington, Idaho and California—and a member of other technical and policy committees concerned with fisheries conservation and restoration work along the entire West Coast. The Subcommittee has my testimony from the 18 March hearing in Los Angeles on S. 484 and I will attempt not to repeat that which is already on the record.

My work with the fisheries and with fishermen all along the West Coast has made one thing very clear to me. Fish do not respect state lines. The fishermen and fish-dependent businesses of Oregon and Washington have nearly as great a stake in the salmon and steelhead resources of my home state as do Californians. When the federal Central Valley Project's (CVP) diversion of the Trinity River destroyed the salmon runs of that northern California river, the pain felt in Coos Bay, Oregon was just as great as it was in Fort Bragg, California. These are regional, national and international resources we are talking about here today. The CVP is not, and never has been, simply a California affair.

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* Additional material referred to in his prepared statement can be found in the appendix.

I suspect it is difficult for Senators from other federal reclamation states to understand the kind of raw political power CVP proponents have wielded in California for the past 50 years. I would like to give you one example. When CVP operations began at Friant Dam on the San Joaquin River in 1945, the Bureau of Reclamation released no water to conserve the salmon spawning run in the river below. None. Not a drop.

When fishermen protested the drying-up of the San Joaquin to the State Water Rights Board, the Board sided with CVP interests and ruled against the conservation of the 100,000 king salmon that spawned below Friant Dam. In its infamous Decision 937, in June, 1959, the Board said "The reestablishment and maintenance of the salmon fishery at this time is not in the public interest." Can you imagine a regulatory board in your state saying that conserving a run of 100,000 salmon is not in the public interest?

The destruction of the salmon runs below the CVP's Friant Dam is not an isolated event. The CVP is not a federal reclamation project like those in other Western states, one that simply had one bad day on the San Joaquin River. The CVP is a long and agonizing story of the willful destruction of wetlands, of great flights of ducks and geese, of rivers that once teemed with salmon and steelhead. The CVP has decimated salmon runs in the San Joaquin from 300,000 fish in 1940 to 600 last year. It has slashed the run of winter-run salmon on the Sacramento River from 140,000 thirty years ago to 400 fish last year. The CVP's diversion of 85 percent of the Trinity River has reduced salmon runs there—to no one's surprise—by 85 percent.

The CVP is different than federal reclamation projects in the other Western states. In the other Western states most reclamation project customers are small operators, not unlike what remains of our fishing families. They borrow at the Production Credit Association (PCA) like we do. They organize locally around their Grange, like we do. They have their good years and their lean years, like we do.

The CVP is different. Because it takes the rivers so completely, it controls a vast amount of water—a third of all the developed water supply in California. It enables California growers to prosper during the West's worst droughts. [Every year is a drought in California for our salmon fishery, I might add, some the CVP makes worse than others by ignoring the fact.] When Congress, concerned with drought-scorched farms in other states, approved emergency relief funds in 1988 and 1989, payments of hundreds of thousands of dollars were paid to individual CVP growers who were having their most profitable years ever. [See attached news article.]

The CVP has placed great wealth and absolute political power in the hands of a few California businessmen at the same time that it has driven the state's salmon fishermen and their families to ruin, despair and to the brink of extinction. The Bureau of Reclamation, which is actively cooperating in the conservation and restoration of fish and wildlife in Oregon, Washington, Idaho, Montana, Utah, Colorado and elsewhere has been led around by its nose in California. The Bureau's idea of fish and wildlife conservation in California is to issue press releases. The Department of the Interior isn't in charge of the CVP. Interior doesn't determine how the laws of this nation, the Environmental Policy Act or the Endangered Species Act, apply to the CVP. Those big decisions are all made by the CVP Association, the contractor's, high-paid lawyers and lobbyists. The Bureau of Reclamation just does what it's told in California. The inmates are in effect, running the asylum.

Senators I've listened to all the hand-wringing by California politicians over the terrible impacts of the current drought. They've visited the farms where CVP water deliveries were cut back for the first time in five years of drought. They've visited the cities where people are being told not to water their lawns or flush their toilets. But they haven't seen anything.

"Nobody knows the troubles I've seen", go the words of the old Negro spiritual. Well those who claim to have seen the drought haven't seen the trouble the fishermen have seen. They haven't seen the dried-up salmon spawning beds of the San Joaquin, the American, the Trinity, or the Upper Sacramento like those of us concerned with salmon conservation have. Unlike the fishermen, our home-bred, hand-wringing politicians—clamoring for relief for CVP growers—do not know the trouble visited on ports such as Eureka, or Crescent City, or Trinidad, or Shelter Cove, or my home port of Fort Bragg to see what the CVP and the Bureau have done to these food producing regions. Indeed, they've not been to Brookings, or Bandon, or Gold Beach, or Port Orford—those Oregon communities who economies have been impacted by California's Central Valley Project.

As a result of the impacts of five years of drought and record pumping by the CVP, California and Oregon commercial fishermen are faced with the most restrictive seasons on record. [See attached letter from Pacific Fishery Management Council Chairman Richard Shwarz to Governor Cecil Andrus.] The Pacific Council recommended (12 April) and the Secretary of Commerce has approved (1 May) an ocean salmon season that includes a total closure during the months of May through July for Fort Bragg, historically California's top salmon port, as well as for Shelter Cove. This is the heart of the season for these two ports. Eureka, Crescent City, Brookings and Bandon will have only a token fishery in September. Compare this to the traditional seasons that began on May 1st and continued without interruption through September (California) or October (Oregon). And, for the first time ever, Bodega Bay will lose 45 days of fishing in June and July.

I just finished my first fishing trip of the 1991 salmon season and got off the boat to fly back here last night. I plan go back out again on Thursday. The fishing thus far has been spotty, which is not good considering the season closures we are faced with. The markets for our troll kings, however, are extremely healthy [See attached news article.] We cannot meet domestic demand, much less begin meeting orders from Japan. The President doesn't have to meet with the Prime Minister of Japan in Newport Beach to open the Japanese market for our salmon. The market is there.

If I sound bitter, it's because I've spent too many years watching too many of my friends sell or abandon their boats and their once-proud and independent lives as fishermen. I've sat on all those committees and commissions and learned the laws of our country, only to see them bent and broken by a handful of people who have learned to play the government like a harp, stroking it for subsidies and payments-in-kind, for crop insurance and drought payments on top of unprecedented profits. And, as if that wasn't senseless enough, the fish and wildlife, the wetlands and waters on which they depend have withered and died year by year.

Well, there is a way to begin to make things right. And that is by adopting Senator Bradley and Senator Cranston's bill, S. 484. There is no bitterness in the bill. Its provisions aren't spiteful. They're pretty even-handed, actually. The bill says we are going to help irrigators find modern ways to irrigate and we're going to take the water conserved and we're going to put some of that back in the streams to help fish and wildlife and we're going to make some of it available to help the cities get through droughts. The irrigators and the power users and the general taxpayers are all going to chip in.

S. 484 would be a good, solid start on the long road back to healthy and productive streams and estuaries in California—not just for Californians, but for all the people of this country. It's a fair bill. It's a practical bill. And it's a bill that is desperately needed if we are to preserve the river, bay and coastal communities, like mine, that depend on vigorous free enterprise and a healthy American environment.

Thank you for this opportunity to testify. I will be happy to answer any questions members of the Subcommittee may have.

Senator **BRADLEY**. Thank you very much, Mr. Bingham for your testimony and for Barnacle Bill's poem.

Bill Howard.

STATEMENT OF WILLIAM W. HOWARD, EXECUTIVE VICE PRESIDENT, NATIONAL WILDLIFE FEDERATION, ACCOMPANIED BY EDWARD OSANN, DIRECTOR, WATER RESOURCES PROGRAM

Mr. **HOWARD**. Mr. Chairman, my name is Bill Howard. I am the executive vice president of the National Wildlife Federation.

I will summarize our testimony as briefly as I can.

I am speaking today also for Trout, Unlimited and for our California affiliate, the California Natural Resources Federation.

I am really pleased to register our strong support and to urge the prompt enactment of the bill. You really are to be commended, along with Senator Cranston, for offering legislation that will remedy what we think are the most serious shortcomings of the operation of the Central Valley Project.

As you might guess, our interests strongly leans toward the fish and wildlife issues that have been raised here at this panel and earlier today. We believe that the fish- and wildlife-producing systems of the Central Valley really are broken and desperately need to be fixed. Many key fish and wildlife populations of the Valley are in very poor shape at a considerable loss of ecological, social, and economic value to the State, the region, and the Nation.

In our view the restoration of fish and wildlife in the Central Valley really must proceed apace. Some critics say the bill and its companion, H.R. 1306, should not be approved by Congress until consensus has been achieved by all concerned and affected parties. We say that the fish and wildlife resource simply cannot wait upon the acquiescence of all the parties, particularly those who have contributed to their demise up to this point in time.

We are extremely pleased with several particular points in S. 484. In the interests of time I will not go into the ones we are happiest about. We do have a couple of suggestions that I would——

Senator **Bradley**. Please tell us what you do not like, not what you do like.

Mr. **Howard**. We would like to see a wildlife mitigation program included in the bill, a desirable companion program to the anadromous fisheries. Mitigation program, section 6(c)(1) would be a wildlife mitigation program focusing on waterfowl and other migratory birds and threatened and endangered species. Although other provisions of the bill would facilitate restoration of these species, the full complement of needed mitigation and management tools probably would not be achieved solely by these other provisions.

We would like to see the establishment of interim restoration goals for fish and wildlife to keep all parties affected by this legislation, especially the Secretary of the Interior, focused on successful implementation of the restoration provisions. We believe that establishing aggressive and achievable restoration goals is desirable.

We would like to see the water conservation requirement strengthened. The bill rightfully recognizes the Bureau's implementation of its conservation authority under section 210 of the Reclamation Reform Act which has failed to achieve any significant water savings. The bill can and should go further, we believe, in eliminating wasteful practices by Central Valley Project contractors.

We would like to see the Energy Conservation and Repayment requirements strengthened in the bill. The chronic underpricing and the failure to encourage conservation that have marked the water supply functions of the CVP have also marked its power supply functions. Meanwhile the Western Area Power Administration prepares for the commitment of CVP power in new long-term contracts in 1994 without even initiating an environmental impact statement on the appropriate range of power marketing criteria.

As I say, we have got more complete remarks that we are submitting in writing.

This summarizes our ideas.

[The prepared statement of Mr. Howard follows:]

PREPARED STATEMENT OF WILLIAM W. HOWARD, EXECUTIVE VICE PRESIDENT, NATIONAL WILDLIFE FEDERATION

Mr. Chairman, my name is William W. Howard, and I am Executive Vice President of the National Wildlife Federation. I am accompanied by Edward Osann, Director of the Federation's Water Resources Program, and Steve Moyer, our Legislative Representative for fish and wildlife issues. The National Wildlife Federation is the nation's largest environmental organization with affiliates in 51 states and territories and 5.5 million members and supporters nationwide. The Federation has a longstanding interest in the management of migratory birds, anadromous fish, and water resource management, issues central to the focus of S. 484.

I am pleased to register the strong support of the National Wildlife Federation for the prompt enactment of S. 484. You are to be commended, Mr. Chairman, along with Senator Cranston, for offering legislation to remedy many of the most serious shortcomings in the operation of the Central Valley Project. More than any other legislation considered by the Senate, S. 484 is geared to address the root causes of water problems in California, not simply their symptoms.

NATIONALLY IMPORTANT FISH AND WILDLIFE RESOURCES ARE AT STAKE

The rich habitats of California's Central Valley are essential for producing fish and wildlife resources which are vital to the state, the Pacific coastal region, and the nation. Wetlands of the Central Valley provide wintering habitat for over one-half of the waterfowl using the Pacific Flyway, making it one of the five most important waterfowl areas in the United States. The Sacramento and San Joaquin River systems of the Central Valley are vital for salmon and steelhead production for the west coast region, producing 90% of all the salmon caught off the state's coast. Consequently, habitats of the Central Valley are critical to achieving the goals of not only state fish and wildlife conservation plans, but also the goals of federal law and international treaties, such as the Magnuson Fishery Conservation and Management Act, the North American Wetlands Conservation Act, and the various migratory bird treaties to which the U.S. is a signatory.

However, we are here today discussing S. 484 because the fish and wildlife-producing systems of the Central Valley are broken and desperately need to be fixed. Many key fish and wildlife populations of the Central Valley are in very poor shape, at a considerable loss of ecological, social, and economic value to the state, the region, and the nation. The decline of many of these resources is staggering:

—a 50% decrease in waterfowl populations since 1974 to an all time low of 2,000,000 ducks;

—a 50% and 99% decline of Sacramento River fall and winter runs, respectively, from historic levels, leading to the federal "threatened" status listing of the winter run in accordance with the Endangered Species Act; and

—waterfowl habitat reduction from 4,000,000 acres of wetlands to 290,000 acres, a 92% decline.

Some critics may say that this bill, and its companion, H.R. 1306, should not be approved by Congress because consensus has not been achieved by all concerned and affected parties. In our view, the restoration of fish and wildlife in the Central Valley cannot wait upon the acquiescence of all who have contributed to their demise. This Congress must act now to prevent large scale extinctions of fish and wildlife populations in the Central Valley, and initiate the long overdue task of restoring the resources damaged by water and power development.

S. 484 CONTAINS MANY OF THE ESSENTIAL TOOLS NEEDED TO RESTORE FISH AND WILDLIFE AND IMPROVE WATER MANAGEMENT IN THE CENTRAL VALLEY

S. 484 supplies the Secretary of the Interior with many important tools to restore fish and wildlife and improve water management in the Central Valley. Some notable examples of these tools include the following:

Supplementing the CVP organic act to provide authority and direction to protect, restore, and enhance fish, wildlife and related habitats affected by the CVP, and to provide equitable treatment to these resources relative to other purposes of the project;

Providing adequate and dependable water supplies to National Wildlife Refuges in the Central Valley;

Requiring the Secretary to develop and implement a program to mitigate fully and expeditiously the damages to Central Valley anadromous fish populations incurred by construction and operation of the CVP;

Providing the Secretary with the authority and mandate to manage CVP water to carry out fish and wildlife restoration programs;

Establishing a new Central Valley Project Restoration Fund, sustained primarily by a surcharge on CVP water and power rates, to provide critical funding for fish and wildlife resource protection and restoration programs, including a new program designed to protect and restore "the best examples" of the Central Valley's biological diversity (including rare species, communities of species, or large-scale natural ecosystems);

Requiring that all recipients of CVP water under new or renewed contracts fully meter their groundwater and surface water supplies within five years, a giant step forward considering that fully half of the agricultural water systems in California are presently unmetered;

Reserving a share of water for fish and wildlife purposes as a condition of water contract renewals, until the environmental requirements of the Act have been met; and

Assuring flexibility and encouraging efficiency in the distribution of CVP water among water users.

NWF RECOMMENDS SEVERAL STRENGTHENING AMENDMENTS

While NWF fully supports S. 484, its purposes, and the key provisions highlighted above, we offer here several strengthening amendments for the Committee's consideration.

Include a Wildlife Mitigation program. A desirable companion program to the anadromous fisheries mitigation program of section 6(c)(1) would be a wildlife mitigation program that would focus on waterfowl, other migratory birds, and federal threatened and endangered species. Although other provisions of the bill would certainly facilitate restoration of these species (i.e., improved water supplies for the National Wildlife Refuges and activation of the Central Valley Project Restoration Trust), the full complement of needed mitigation and management tools probably will not be provided solely by these provisions. Further, restoration of these wildlife species clearly are federal and international priorities mandated by the federal laws and international treaties noted above. Therefore, assigning special emphasis and priority to mitigation of CVP damages to these wildlife species is equally as important and useful as it is for anadromous fisheries.

Establish Interim Restoration Goals for Fish and Wildlife. To keep all parties affected by this legislation, especially the Secretary of the Interior, focused on successful implementation of its fish and wildlife restoration provisions, we believe that establishing aggressive, achievable interim restoration goals is desirable. For example, H.R. 1306 calls for doubling the natural production of salmon, steelhead, and striped bass by the year 2000, and for restoring by the year 2000 population levels of waterfowl and other migratory birds and their habitats in the Central Valley to levels consistent with the North American Waterfowl Management Plan. We believe these goals are useful interim benchmarks on the road to providing the full mitigation of CVP damages required by S. 484. We fully support these goals and recommend including them as interim goals in S. 484.

Strengthen Water Conservation Requirements. The bill rightfully recognizes that the Bureau of Reclamation's implementation of its conservation authority under section 210 of the Reclamation Reform Act has failed to achieve any significant water savings. The bill can and should go further, however, in eliminating wasteful practices by CVP contractors. In addition to universal metering, section 5 should also require:

—billing of customers based on metered use;
—elimination of promotional rate structures, such as declining block rates; and
—systematic leak detection and repair.

Strengthen Energy Conservation and Repayment Requirements for CVP Power Customers. The chronic underpricing and failure to encourage conservation that have marked the water supply functions of the CVP have also marked its power supply functions. Although CVP power rates are among the highest charged by the Federal government, there remain documented failures of cost recovery, and ineffectual implementation of energy conservation authorities. Meanwhile, the Western Area Power Administration prepares for the commitment of CVP power in new long-term contracts in 1994, without even initiating an environmental impact statement on an appropriate range of power marketing criteria. We recommend that S. 484 require:

—repayment of all reimbursable costs found by the Federal Energy Regulatory Commission to be unrecovered in CVP power rates;

—repeal of the language of the FY 91 Energy and Water Development Appropriations Bill that makes nonreimbursable those Federal expenditures for power that is purchased from non-Federal sources and delivered to CVP power customers because of occasional thermal restrictions on Shasta Dam power generation;

—strengthened requirements for energy conservation as a condition for new CVP power contracts.

Thank you, Mr. Chairman for the opportunity to present these views. In the coming weeks, we intend to offer the subcommittee more detailed recommendations for clarifications and improvements in the language of the bill. I would be pleased to respond to any questions at this time.

Senator **Bradley**. Thank you very much, Mr. Howard.

And let me thank all of you for your testimony. I think that it is very helpful and that it focuses on many of the issues that ultimately we will have to deal with if we are going to move this bill expeditiously, which is my hope.

Senator Seymour.

Senator **Seymour**. In the interest of time, I have no questions.

Senator **Bradley**. Senator Burns?

Senator **Burns**. I do have a couple of questions here. I am glad Mr. Bingham is in the same category as us cowboys. You will now go on the list of endangered species. Then you get all the rest of these folks speaking for you then. We are going through the same thing in Montana with public lands because we have a movement up there that they just do not want any livestock on BLM land anymore.

I have a question here. I like what Ms. Friedman said about restoration, because I think that is where we should be focusing, and this Government should be focusing on restoration. With agriculture and all the interests that you have down there, can areas be found in California which can be restored and will be restored under this legislation?

Ms. **Friedman**. We do it routinely. In fact, in many cases we are actually integrated agricultural practices with restoration. We are having local farmers do the restoration. We are interplanting trees, say, with agricultural crops. We have identified along the Sacramento River several hundred, actually tens of thousands of acres of restorable habitat. We have also identified similar areas on other river systems.

Senator **Burns**. When was the Central Valley Project started and when was it completed?

Ms. **Friedman**. I do not know.

Senator **Burns**. Can anybody answer that?

Mr. **Graff**. Mr. Chairman, I think it was authorized in the 1930's. And the Bureau takes the position that it is not quite completed yet, but the major features were built in the 1940's and then a few later on.

Senator **Burns**. Correct me if I am wrong. The majority of wetlands which would be restored under this piece of legislation, I would imagine those areas are identified. Is that true?

Ms. **Friedman**. That the areas for restoration have been identified?

Senator **Burns**. Yes.

Ms. **Friedman**. Several areas for potential wetlands restoration have been identified all over the State. I do not recall that this legislation calls for certain acreages.

Senator BURNS. I guess what I am getting at is, were most of these wetlands gone prior to the project and not as a result of this project?

Ms. FRIEDMAN. Your question is were they gone before the project was initiated?

Senator BURNS. Yes.

Ms. FRIEDMAN. I do not have the answer the question.

Senator BURNS. I think before we can make any kind of an intelligent decision on this, I think that determination should be made because, are we trying to restore something that was gone prior to the project? And now you are asking the project to sort of shoulder the responsibility of restoration.

Ms. FRIEDMAN. If I might, Senator, respond to that point. I have heard several people say that they think that we are asking, that the legislation is asking the Central Valley Project to bear the full responsibility. There are many entities, including the Nature Conservancy, State government, and some other Federal agencies that are shouldering a lot of that burden. It is not going to be the full cost of restoring these habitats. There are already millions of dollars being spent annually to do just that. It is not enough money. We need more.

Senator BURNS. I used to travel the San Joaquin some 30 years ago and we could see even back that then development and how it may have some of its impacts. I am wondering if some of those impacts—because maybe if you do not know the history, the San Joaquin Valley as a dry valley was one of the leading wheat producing areas there was in the world at one time. This was before it was converted over to be an irrigated valley.

Mr. Howard, do you have any idea what it would cost to meter the water systems under section 5 of this legislation?

Mr. HOWARD. I am going to ask Ed Osann of our staff who has worked on that particular question to address that.

Mr. OSANN. No, we do not have an estimate of the cost of metering. The individual cost of meters, say, to meter an irrigation well could be in the range of $450 to $500.

Senator BURNS. I understand California is doing a plan and I would like to see what that plan looks like because I am a believer that you solve all problems at the local level, too. I am an old county commissioner. I know I operated a lot differently as a county commissioner when my taxpayers could walk in my office or call me up at 2:00 in the morning and want something done.

Would you have any problem with kind of slowing this legislation down until we see what California has in their plan?

Mr. HOWARD. I think the fish and wildlife resources in particular have been so decimated in the Central Valley that it is past the time that we can wait. This legislation really needs to move forward. We need to get started on these restoration efforts that are described in the bill.

Mr. GRAFF. Senator, I might have a somewhat different view on that. I do think that Governor Wilson is moving aggressively to address this legislation as was indicated in his letter earlier. And I would hope that we could work with him and with you on the committee and others to get this bill considered even this year and certainly in this Congress.

Senator **Burns**. To follow up on that, Mr. Graff, given your vast experience in California water management, do you have a definition of what equitable treatment for fish and wildlife would mean under California law?

Mr. **Graff**. I think that kind of a phrase is subject to broad interpretation. But I can say with some confidence that what the Bureau of Reclamation has done to date in terms of its approach to fish and wildlife has been inequitable.

Senator **Burns**. I have no further questions.

Senator **Bradley**. Thank you very much. Let me thank the panel very much for coming all this way. And thank you for your testimony.

Mr. Bingham, you should know that Senator Hatfield strongly identifies with your sentiments in his statement, particularly with regard to the CVP's impact upon Oregon fisheries.

Mr. **Bingham**. It is a regional problem, not a State problem.

Senator **Bradley**. Let me thank all of you very much for your testimony.

We have two panels left. We are not going to be able to do two panels. So I am making the chairman's decision of collapsing it into one. And so we are going to have Mr. Roger Fontes, Assistant General Manager, Northern California Power Agency as well as Jason Peltier, manager, Central Valley Project Water Association; Richard Moss, general manager of the Friant Waters Users Authority; and Bob Vice, president of the California Farm Bureau, all take the table simultaneously.

I disappear from this room at 5:45 p.m.

Is everyone ready to go? Let us see if we can do this. What I would you to do is, I would like you to dispense with repeating what is the bill and simply tell me what changes you would like to see in the bill. And I think that would be the helpful. Your full statement will be in the record in full. And we will, of course, have another hearing in California at the end of this month.

Let us begin with Mr. Fontes. Thank you very much for coming. And let us see if we can do this with a few minutes each.

Mr. Fontes, and I apologize, but the hearing has gone on and on.

STATEMENT OF ROGER A. FONTES, ASSISTANT GENERAL MANAGER, NORTHERN CALIFORNIA POWER AGENCY, ROSEVILLE, CA

Mr. **Fontes**. Thank you. I am Roger Fontes from the Northern California Power Agency. Thank you, Senator, for allowing me to appear here today on behalf of the 550,000 customers that represent the consumers in Northern California Power Agency.

My board of directors consists of locally elected officials from the cities and agencies. While they serve on the NCPA, officials deal with electric issues. They have been elected from the general public and share political and environmental values which you have heard expressed here today.

CVP power output is very important to us. Hydropower is usually the most important and valuable component of electric utilities resource mix. The CVP is that to us. We rely upon the CVP for about 80 percent of our total hydropower. And we support a number of provisions in S. 484 and hope that it can be amended in several critical ways.

Senator **Bradley**. That is what I want to know.

Mr. **Fontes**. The most important item that we have difficulty is with a lack of distinction between mitigation and enhancement. We believe the project beneficiaries, ourselves and others, have an obligation to have a responsibility to mitigate the impacts of the Central Valley Project.

We are very concerned that the bill goes and allows the Secretary and others to go beyond the mitigation and to use CVP water power and other valuable resources for enhancement that may actually be mitigating the impacts of other entities. We have a problem with that.

We do not have difficulty with the protection and enhancement becoming a project purpose, but it does seem that in the context of doing that the question of enhancement and mitigation have to be dealt with.

We have no difficulty with the project power rates going to the refuges, but we are concerned that State refuges provide for their own water and power, at least some payment for water and power for those facilities.

We like the idea of the operation maintenance surcharge, the capping of our costs, but again the ambiguities about enhancement, mitigation concern us as to how much of that restoration trust money is going to go to mitigation and if any of it is going to go to enhancement. And then the fact that we may have to come back and pay for other features case by case, item by item, feature by feature, that could cost us. That could be double jeopardy.

For many reasons we really think the plans that you call for, the anadromous fish mitigation plan, the Hoopa Valley Indian trust obligation plan, and the State law that deals with fish passages should return to the Congress for ultimate authorization. We think that would give you a chance to look at these questions of mitigation versus enhancement, satisfy yourselves that other entities that can create problems up and down the river have been part of the process and are part of the solution.

Lastly, and perhaps, since we are the only ones that will speak to this today, is that the transfer of the CVP cannot just be seen as a transfer of an in-State water facility. There is a very important power component here that has to be dealt with. There are market conditions for electric power in Northern and Central California. And without taking that into consideration, a transfer of the CVP could have very detrimental affects on NCPA and its customers.

The only feature that we believe currently is absolutely ripe for legislation is a plan that you alluded to earlier, Senator Bradley, the State plan, the Upper Sacramento River plan which we have been working on for now about 3 years which is part of Senator Seymour's bill to implement that portion of the plan, S. 728.

Finally, we would just like to say that there is this equilibrium that has been established in Northern California in terms of the power supply and we would not want to see that upset without due process and thorough investigation.

[The prepared statement of Mr. Fontes follows:]

PREPARED STATEMENT OF ROGER A. FONTES, ASSISTANT GENERAL MANAGER, NORTHERN CALIFORNIA POWER AGENCY, ROSEVILLE, CA

I. INTRODUCTION

I would like to thank the Chairman, Senator Seymour, Senator Cranston and the Subcommittee and staff for the opportunity to comment today. I will confine my remarks to the fish and wildlife portions of S. 484, and to the provisions calling for a study of the transfer of the Central Valley Project to the State of California.

The Northern California Power Agency (NCPA) agrees that the Central Valley of California has suffered considerable ecological damage in the past century and a half. The NCPA agrees that the federal Central Valley Project (CVP) has contributed significantly to that damage and that CVP users among others must do more to correct it.

We believe that S. 484 heads in many constructive directions towards the solution to the Valley's environmental mitigation problem. We agree partly with its revisions in CVP project purposes. We agree with the studies it commissions, with implementation of waterfowl refuge water supplies, with the implementation of some of the Upper Sacramento River program which the bill achieves indirectly, with the creation of a Restoration Trust, and with the concept of an annual surcharge as a way to establish the mitigation obligation of CVP users. We agree that action should be taken as quickly as possible to authorize environmental remedies which are understood and which are supported by consensus. In this regard we have supported and continue to support federal authorization of the complete Upper Sacramento River Restoration plan, as is proposed by S. 728 introduced by Senator Seymour.

The program in S. 484 would cover waterfowl as well as fisheries and would range over the entire California Central Valley. The bill contains a number of mandates and authorities which are far reaching to the point of being open ended. Before we would be able to support final passage of S. 484, we believe that a number of these general authorities should be restricted to programs we understand and are reasonably confident will work. Other authorities should be withheld pending further Congressional review of their effectiveness, costs and effects on CVP operations.

We believe that the comprehensive environmental program that the Valley does need must distinguish between actions which mitigate for damage the CVP has caused and actions which constitute use of the CVP to enhance the environment over its natural condition, or to mitigate for damages caused by other, non-CVP human activity.

We also believe that the Secretary's working relationship with the Restoration Trust, the State of California and other entities with a responsibility for the problem should be clearly defined.

Lastly, we believe that guidance must be given to the CVP transfer study commission to prevent possibly serious dislocations in the California and west coast energy markets as an inadvertent consequence of a CVP transfer which is being viewed primarily as an in-state California water project consolidation. The CVP's transfer would be an important energy issue as well as a water issue.

The Northern California Power Agency (NCPA) is comprised of 13 cities, one irrigation district and one rural electrical cooperative in Northern California. Together these entities provide electrical service to more than 550,000 people. While the NCPA's immediate task is to help our member cities' perform their power supply function, it is also important to realize that our Board is comprised of publicly elected officials who are politically and personally interested in the State's environmental problems and in the objectives of this legislation.

As you know, hydropower is usually the most valuable component of any utility's energy mix. Many utilities in California obtain their hydropower from projects licensed for 50 years by the Federal Energy Regulatory Commission. Recent changes in law have effectively grant these existing licensees permanent claim to public resources. Although some of our members hold such licenses independently, we rely heavily on our contracts with the Western Area Power Administration (Western) for our hydropower, and Western's hydropower comes from the Central Valley Project (CVP). The percentage of CVP power in each NCPA member's generation mix varies, but on average CVP hydropower capacity represents 80 percent of our members' total hydropower and 40 percent of our total power.

In short, we are greatly affected by operational decisions and impositions of costs on the CVP. Our comments today are focused on our concerns and areas of experience. The water users and rural communities throughout the State who are also significantly affected by the legislation are more qualified to speak of its impacts on them. State representatives can best comment on the bill's impact on the general California economy.

S. 484 affects the power users in four ways, and might very significantly affect them in a fifth:

1. Section 6a establishes restoration, protection and enhancement as CVP purposes and directs that the Secretary operate the project to implement them. This would change CVP operations and therefore electrical power output in ways we cannot now determine.
2. The use of project power at project power rates to operate and maintain fish and wildlife facilities would result in less CVP power being available to fulfill Western's firm power contracts, requiring Western to purchase higher cost replacement power and to pass those higher costs on to the power customers.
3. The $30 million annual operation and maintenance surcharge placed on the project users for contribution to the Project Restoration Fund would result in direct costs to power customers; and
4. The bill preauthorizes implementation of three plans which have not yet been developed: one to mitigate for the CVP's impacts on anadromous fisheries, another to comply with a state law pertaining to fish passage through dams, and a third to fulfill trust obligations to the Hoopa Valley and other tribes. Implementation of these plans would result in unknown new CVP facilities and operational changes. These in turn would probably result in higher costs to the CVP power customers.
5. The proposal to study transfer of the CVP to the State of California could lead to impacts more extensive and perhaps serious than any of the others.

Central to our response to the first four of these impacts is the public policy distinction we think should be drawn between mitigation and enhancement. We believe that the bill's requirements should be categorized as mitigation or enhancement, or that some division of environmental responsibilities should be defined along mitigation versus enhancement lines. It would follow that the costs of mitigation should be borne by project beneficiaries, while the costs of enhancement should be borne by the Treasury. Our testimony tries to apply these principles to the legislation's impacts on us.

II. PROJECT PURPOSE

The bill makes restoration, protection and enhancement of the Central Valley into formal project purposes.

The NCPA assumes that your word "restore" essentially means mitigation. If so, we agree that restoration or mitigation should be a requirement of the project. The NCPA is not certain that this means restoration or mitigation must actually be a purpose of the CVP. However, we do agree that it should be an integral component of any action taken for the sake of a project purpose. If water supply is a purpose, mitigation for water supply's impacts is inseparably part of that purpose. We would accept designation of restoration or mitigation as a purpose in this sense, if the Congress perceives that such a designation is necessary to establish mitigation's priority as a component of the CVP's primary activities. We note merely the need to distinguish the CVP's impacts from impacts from many other sources when determining the CVP's precise mitigation obligation.

We take protection to mean essentially the same as mitigation. Protection implies avoidance of damage whereas restoration implies compensatory action to recapture lost values, but in either case the environment is to be held harmless from human activity. Therefore designating protection a project purpose would be acceptable for the same reasons as mitigation or restoration would be. Again, however, we believe it necessary to distinguish carefully the CVP's impacts from the impacts of others.

While the CVP might well be used to enhance the Central Valley under appropriate conditions, we do not believe that enhancement should be a CVP purpose per se. The actual fact is that enhancement, whatever its merits, is not really a "purpose" of the Project. The government built the CVP to obtain water, power, navigation, flood control and other benefits.

This rises above a semantical problem. Making enhancement a project purpose would unnecessarily complicate operations of the project, lead to delays in the agencies and the courts, and inhibit the CVP's functioning on behalf of all its purposes, including improving the environment.

Enhancement does not need to be a purpose to accomplish the actual goal of this act, which is mitigation. We would suggest that the bill allow the Project to be used to enhance Valley habitat to the extent that enhancement does not conflict with the other project purposes on which many people are economically and socially dependent. If CVP users actually do mitigate the CVP's impacts fully, plus protect it completely against degradation of the status quo, enhancement should be a laudable and permitted but subordinate goal to the actual water, power, navigation, and flood control purposes.

Enhancement represents a political decision by the Federal Government to use CVP facilities for certain purposes beyond benefit to its users. The beneficiaries of enhancement are the general public, and therefore enhancement costs should be a government, i.e. taxpayer, responsibility. In some cases, use of the CVP to improve habitat might be enhancement from the CVP's standpoint but might actually constitute mitigation of another entity's damage. To the extent more specific beneficiaries of enhancement can be brought into the legislation's financial scope—such as sport and commercial fishermen, recreational uses in general—we would support mechanisms to include their contributions toward enhancement in order to relieve the general taxpayer.

In sum, we request that the project purpose language of the bill be amended to give restoration and protection a priority inseparable from other project purposes, but to make enhancement a goal subordinate to other purposes. We also recommend that the bill include findings or other declarations of policy to distinguish mitigation from enhancement and to assign costs for the former to the Project users and costs for the latter to the Treasury, or other beneficiaries of enhancement by the CVP to the extent they can be identified and reached.

III. PROJECT POWER

Applying the mitigation and enhancement distinction to use of project power, we agree with use of project power at project rates to operate and maintain fish and wildlife facilities necessary for project mitigation. We do not yet know whether this would amount to a small or large amount of power. However, we would agree in advance to use of project power for mitigation and we would agree to pay the higher replacement costs necessary if the mitigation power curtails the hydropower component of our firm, contracted supplies with Western.

However, if project power is used to operate or maintain facilities which enhance the Central Valley (or mitigate the impacts of others, such as uses permitted by state or local governments) the capital and operational costs associated with that power should be allocated to enhancement—i.e. the taxpayer or other enhancement beneficiaries—and not to us.

Similarly, if power use for enhancement reduces the component of hydro power which would otherwise be available under our firm contracts, we believe the costs for replacement power should be borne by those benefiting from enhancement and should therefore be non-reimbursable by us. In this case, we would be losing an asset which we have contracted for and helped finance and on which we are dependent. Another interest would benefit from our loss. Because the general government is that beneficiary, the general fund should pay for replacement power.

IV. OPERATION AND MAINTENANCE SURCHARGE

The NCPA would support an operation and maintenance surcharge on water and power rates sufficient to mitigate fully for the CVP's environmental impacts. If that amounts to $30 million a year, we would not object to $30 million. However, we do believe that the initial capital and ongoing operation and maintenance expenses should be determined in light of the studies which S. 484 directs the Secretaries of Interior and Commerce to undertake. When the Secretaries present these plans to Congress, a variable funding schedule which adjust the surcharge to the requirements actually foreseen might be appropriate.

We appreciate your approach of placing an annual cap on the CVP users' mitigation obligation. It eliminates cost implications for us that the open-ended provisions in this bill would otherwise cause. We understand the concept of an annual surcharge as essentially a Congressional finding that, after balancing many factors and imponderables, the CVP users' mitigation obligation will elude a programmatic or biological definition and must simply be established in terms of a financial obligation. The complex interrelationships between CVP impacts and others' impacts, the varying degrees to which the federal, state, local and private interests causing impacts can be brought to the table, and the need to "restore" old impacts with entirely new, man-made remedies—perhaps off-site—may impossibly complicate the precise designation of mitigation responsibility facility by facility, operation by operation.

In this light we support establishment of our mitigation obligation by means of an annual surcharge. We have several suggestions to make concerning this approach however.

The bill needs provisions ensuring that the surcharge plus operational losses will in fact constitute the CVP users' full mitigation responsibilities. We note that the Secretary's study is to "fully" mitigate the CVP's impacts on anadromous fish, but half our surcharge is being allocated to the Restoration Trust. Does that mean that we will fully mitigate via the Secretary's plan, plus give enhancement funds to the Trust? Or, more probably, are the Trust's unspecified activities simply going to be considered half our mitigation obligation, leaving the Secretary responsible for the other half? We would request an addition to Section 6c(1) as follows:

> (1) develop and operate a program to mitigate fully and expeditiously in conjunction with those efforts of the Restoration Trust financed by the surcharge levied pursuant to Section 7(b) of this Act for damages suffered by anadromous fish . . .

Second, the bill would still allow the CVP users to be assigned other costs through the conventional authorization and appropriation mechanisms despite already paying full mitigation costs through the surcharge. The surcharge may constitute our full mitigation obligation but the bill does not protect us from costs in excess of mitigation. In fact, preauthorizing the Secretary's mitigation plan itself might well preauthorize far more facilities than can be financed with half a surcharge. Or, simply making project purposes out of mitigation and enhancement could be considered generic authorization for unspecified new operational changes and perhaps facilities. Lastly, there is nothing to prevent future Congresses from relying on the CVP over and over again—the CVP being the only tool at its disposal—to remedy environmental problems in California caused by non-CVP activity.

All those activities could be eligible for funding and reimbursable by us through the conventional appropriations process in addition to the facilities and activities funded through surcharge.

An example of this double jeopardy problem has already occurred. The Shasta Temperature Control Device (TCD) has been proposed for construction in 1992 in the drought bill now before this Committee. Considered in isolation, the TCD is a mitigation device for the beneficiaries of Shasta Dam: water, power, flood control, recreation, etc. However, the TCD has also been proposed as part of an Upper Sacramento River fishery improvement package, which would fund many other State and local government responsibilities as well as federal ones.

The NCPA accepted our portion of a general cost share formula for this package in which the Shasta TCD was included. However, were Shasta to be dropped from the package and financed conventionally through the CVP allocation procedures, we would resist the double jeopardy of being asked to help fund the same share of the Upper Sacramento improvements as well.

If our understanding of the reasoning behind an annual surcharge is correct—that it is intended as a cap to define mitigation responsibilities—we would suggest a further language change in Section 6c(1) stating that the mitigation called for in the program shall be all the mitigation the Secretary may implement for the CVP under this authority or others, and that this mitigation shall not cost more than half the surcharge each year on average.

Third, we assume the Secretary will allocate the annual surcharge among CVP users according to standard procedures and criteria. Report language should provide that direction.

V. NEW PLANS, NEW FACILITIES AND OPERATIONAL CHANGES

Preauthorization of plans called for in Section 6c(1) will result in unknown facilities costs and changes in power generation attributable to new operational regimes. We urge that these plans be commissioned by the Congress but that only completed ones, which are understood and on which consensus exists, be authorized now. Those are the Upper Sacramento River program and the Central Valley refuge requirements at levels two and four as defined in the Bureau of Reclamation's Refuge Water Supply Report.

The other studies should return for Congressional authorization in several years when they are completed for several reasons. One reason is simply that we do not know whether the plans will work. The track record thus far indicates that these are complicated, difficult biological problems that need to be thought through comprehensively.

The plans will help Congress set the surcharge. While we can anticipate that the plans will not be able to distinguish precisely mitigation actions from enhancement actions, the plans will give Congress a better idea of the overall cost of Valley habitat improvements, a better sense of the cash flow requirements for financing those improvements, and a better if not exact basis for setting the CVP's mitigation responsibilities at a certain figure.

Another reason for bringing plans back to Congress for authorization is that we do not know whether the Secretary will be judicious in his distinctions between mitigation versus enhancement. The Administration will be strongly motivated to categorize as mitigation all the provisions of these plans in order to avoid general fund responsibilities.

Also, agencies will be under strong pressure to do many things, sometimes hastily, to avoid endangered species declarations. While we are as anxious as any user group to avoid such declarations, we also know that haste has already led to waste and has ultimately lost time. Preparation of a plan for Congressional authorization will impose rationality and discipline on the recommendations.

Similarly, we do not know how or whether the Secretary will correlate his CVP mitigation activities with those of other parties in the field. One party would be the Restoration Trust. Half of our mitigation effort is devoted to the Trust. Congress should correlate what the Secretary proposes to do in light of what the Restoration Trust proposes. We recommend in this regard that the Trust be asked to communicate its agenda to both the Secretary and the Congress for this correlation.

The need for Congress to relate the Secretary's mitigation plan to the activities of the Trust is augmented by the Trust's mission to improve Central Valley habitat without direct regard for whether a facility or program is mitigation or enhancement or even relates to the CVP. In fact, the Trust is somewhat aimed at non-CVP problems by the text of this bill. Its appointees are primarily State of California appointees; 20 percent of its funding is allocated to the California Department of Fish and Game.

Nor do we know whether or how the Secretary will distinguish the CVP's impacts from impacts of other federal, state and local water projects, navigation, flood control, dry land farming, gravel extraction, mining, wetland infill, urbanization, and the general impact of civilization. The CVP has controlled only 40 percent of the water in the Central Valley since only the 1930's and 40's. It is arguably heir to environmental problems caused in past years on land which it now irrigates, but it has hardly been responsible for all the environmental insults wreaked on the Valley since the days of hydraulic gold mining.

While S. 484 directs in several places that the Secretary formulate plans in conjunction with the State, the legislation could be strengthened by more concrete direction that the Secretary actively collaborate with the State and other non-federal entities in planning the comprehensive solution to this problem. The legislation could specify that the Secretary's plans delineate federal from non-federal responsibilities. Just as the bill now links the Secretary's program with State implementation of its responsibilities in the Upper Sacramento River Plan, the bill could direct that the Secretary's plans generally be made contingent on non-federal cooperation. Congress will be better able to define and authorize these subtle but important linkages between federal, state and local efforts once a federal plan is developed with such relationships as part of its charter.

Lastly, the legislation could involve the State of California in the overall solution by providing for its participation in the federal plan, and, it follows, for federal participation in the planning which the State is currently doing for itself. Perhaps a representative joint-planning mechanism should be established, such as a State-Federal commission operating under parallel state-federal authorizing bills.

For these and other reasons we believe these plans should be returned to Congress for specific authorization before they are implemented. Congress cannot achieve the objectives of this Act simply by delegating the problem to the Secretary. Congress will have to take the responsibility for ensuring that this plan is coherent, complete, concrete and fair enough in its distinctions between mitigation and enhancement and federal versus non-federal responsibilities to merit support over the years.

There is no substitute or short cut by which Congress can avoid this necessity. Further, we believe Congress should want to legislate this multifaceted, multi-level plan for its own reasons.

First, Congress has a large stake in careful procedure (as does the environmental movement, for that matter). One of the main premises for fiscal and environmental reforms in recent years has been objective, systematic procedural requirements. Preauthorizing massive programs sight unseen is not good procedure. Congress no longer authorizes water projects that way; it should not authorize environmental programs that way either.

Second, it is ironic that with the intent of finally forcing the Administration to entertain a mission it has neglected, the bill hands more discretion to the Administration. What basis does Congress have for assuming the Administration will do a better job?

Lastly, unless Congress legislates these matters with a concrete understanding of what it is doing—i.e. after the plans are formulated—setting all these forces in motion will probably result in conflict and confusion. The competing purposes, programs and interest groups with a grip on the CVP will fight each other in the agencies and the Courts. Congress' own purposes will be thwarted.

VI. CVP TRANSFER COMMISSION

The CVP is generally thought of as a water project, because its water supply function has been the historical focus of the project, because the project is operated primarily for water, and because water controversies in recent times have generated so much attention. Therefore, the idea of transferring the CVP to the State of California is viewed primarily as a water policy matter.

The NCPA asks that the Committee not consider water and power as being equivalent commodities, or as having equivalent problems, or as needing equivalent Congressional treatment. First, whatever the issues with proper water management, the power side of the CVP program is not in need of fixing beyond the need to contribute to fuller mitigation. CVP power repayment covers costs fully and is on schedule for complete repayment. There are no subsidies. In fact, power pays others' costs.

Secondly, the power grid is very different from the water grid, with entirely different regional and inter-regional electrical and economic interconnections. In its focus on CVP water the Congress should not forget that the CVP generates enough power to make even the potential of its transfer a very significant energy issue in the energy markets of California and beyond. The CVP has a total 2300 megawatts nameplate capacity in the Central Valley. Western contracts for 1152 megawatts of firm-power with public entities in the State, and additionally provides power for a large number of federal installations, plus sells large amounts of surplus power to the Pacific Gas and Electric Company.

In short, the California energy market has developed during the post-war period with the Central Valley Project as a key premise in its overall balance. This balance includes complex transmission and contractual arrangements which are not always satisfactory from our standpoint because they make us dependent for vital services on a competitor. Even when proposing merely to study transfer of the CVP to the State, the Congress should ensure that the study not disrupt the current competitive balance—i.e. the current access to hydropower—that now characterizes the energy marketplace in our region.

The CVP's power facilities should remain under federal title or control, most feasibly through continued contracts with Western. It is appropriate that Congress retain authority over this power. All hydropower comes from public resources in one way or another, and almost all of it is allocated pursuant to federal law, either through FERC or through federal projects to federal customers. Over the years, Congress has been the authority under which the current equilibrium has evolved. Congress must maintain that role so that all sides can continue to work in the same arena to retain the equilibrium.

In 1986 Congress in its wisdom awarded FERC license holders preference to the re-issuance of their 50 year licenses. In doing so, Congress rejected arguments that these public resources should be put up for public bid, or that relicensed power as well as newly licensed power should be allocated to preference customers. But Congress was not writing upon a relatively clean slate, as it was 50 years ago. Instead, Congress saw an existing marketplace that had evolved over 50 years in partial dependency on FERC licensed power. It decided that dislocation caused individual utilities by reallocating hydro resources would be great. It also saw that the economic impact of higher rates for the same power from the same facilities would be purely and pointlessly inflationary.

The same principles apply with CVP power. If the Congress is interested in turning the title and developed water yield of the CVP over to the State for water policy reasons, we urge that the power components of the project be retained in federal control if not ownership, with the equilibrium in the northern California Power markets remaining as it has developed under federal policy.

It may make sense to simplify California's water supply situation by combining the two major surface water supply systems under state authority. Transfer of the CVP power components to the State, however, would divide and complicate jurisdiction over the Western power market.

There may be considerable pressure from the financial community and others to break up the CVP power system into marketable components simply for the sake of marketing those components. Some individual utilities or other entities may view the purchase of one or two components as strengthening their own positions, but will tend to overlook the detriment done to the larger system and perhaps even to themselves as dependents of the system. The NCPA urges the Committee to resist advice from either of these quarters.

Thank you for the opportunity to comment on these very significant matters, Mr. Chairman. We look forward to helping your Subcommittee fashion a lasting mitigation and enhancement program for California's Central Valley.

Senator **Bradley**. Mr. Peltier.

STATEMENT OF JASON PELTIER, MANAGER, CENTRAL VALLEY PROJECT WATER ASSOCIATION, SACRAMENTO, CA

Mr. **Peltier**. Thank you, Senator. My comments will be disorganized, and mostly in response to your opening statement, because you asked some questions, and I would like to respond to those. I would also like to put a few supporting documents, along with my testimony into the record.

Senator **Bradley**. All will be in the record.

Mr. **Peltier**. Thank you, sir. I guess the first concern that you raised—let me go to the list of five questions, whether it is unwarranted Federal intervention, and I would say—I forgot to turn my stopwatch on, I am sorry.

Our answer is the same to those as yours: no to all of those, those are not unwarranted. At the depth of the question, the simple answer is no, but I think we really have to go beyond the simple answer on all of those.

When we look at the transfer of CVP water and whether it would be Federal intrusion to follow State law, that is not really the question. The question is, is the transfer process defined well enough in the bill that will give us comfort about secondary impacts?

We possibly can rely on State law for that, but we would like to see more definition in the context of the CVP and how it is guided. I would say attitudes have been changing rapidly on water marketing and water transfers, and there is a real transition from, let us stop that, that is bad; to let us make it work right, and that is really the hard part.

It was easy to say no. It is hard to say let us make it work. Under State has interesting implications. We have in the past attempted to see transfers go, 1-year transfers and go to the State water board and the State water board says, fine, do an EIS.

Well, it takes more than a year to do an EIS and it was a 1 year transfer, so we are stymied. We have seen a real double standard in California in terms of water transfers. If you want to use ag water to environmental use, not many questions are asked. If you want to move ag water to urban use, not many questions are asked.

If you want to move ag water to ag use, particularly across the delta, you are loaded with a series of burdensome, prove the negative questions; demonstrate how you are not going to hurt the fish and so forth, and that double standard is very difficult to deal with.

On the question of beneficial use, our answer is no, of course not. The project is operated under beneficial use principles of the State, but it is also operated under the objectives and purposes as authorized by Federal statute, and they are not in conflict, but there is different emphases, different reasons and there are different priorities there.

There are identified priorities in those where the concept of beneficial use in the State is a general: If it is good, it is okay, and the CVP is more directed than that.

Relative to the question of environmental accountability, no, we should be held to the same standard in the sense that the project should mitigate for its impacts, but as we have discussed, and Senator Burns hits on it briefly, the difficulty of breaking out and identifying those impacts.

I talked at length in Los Angeles about that. That is one of our greatest frustrations in trying to resolve the problems is identifying who is to blame. We have given up on that basically and have stepped back to say, let us all work together and take what we have as a resource base and improve it and try and equally distribute the responsibility.

My 2 minutes are well up. I would like to say bravo to your recognition to the need—for the need for additional water supplies, that is in fact a fundamental problem that we have, inadequate water and ever increasing demands. The things you have identified in terms of conjunctive use, ground water, surface storage facilities such as Auburn—I think that was not really on your list, but——

[Laughter.]

Mr. PELTIER. But the concepts are all there, and we appreciate the recognition of those concepts, Senator, and I will be happy to—we will do it in questions.

[The prepared statement of Mr. Peltier follows:][*]

PREPARED STATEMENT OF JASON PELTIER, MANAGER, CENTRAL VALLEY PROJECT WATER ASSOCIATION, SACRAMENTO, CA

OVERVIEW

S. 484, as introduced, would fundamentally change the purpose and mission of the Central Valley Project (CVP). While change is inevitable, the magnitude of change, the lack of definition, and abundance of confusion in S. 484 will greatly disrupt the largest water project in the world. This disruption will quite clearly damage the rural economy of California and the total water management system of our state.

The CVP Improvement Act is correct in its recognition that environmental and water management problems exist in California. These problems and challenges were first discovered when the gold miners of the 1800's began using water to work the soil to produce wealth. Over the last decade these environmental issues have dominated our debate, dominated our collective expenditure of research and construction of dollars, and have demanded changes in the way water is managed.

As the water customers of the CVP, our challenge is to work with the committee to improve S. 484 so as to have a clear statement of federal policy on the direction of the CVP, that will be both constructive and consistent with other efforts in California to resolve fish, wildlife and related environmental problems. In order for progress to be made, we must have common understandings as to the meaning of the words used in S. 484. We have, over the last two months raised fundamental questions about the meaning and purpose of specific language in the bill (particularly Sec. 6) and have yet to receive further insight.

PROCESS

We appreciate the opportunity to provide this testimony for the record, we also appreciate the invitation to representatives from around the CVP to provide testimony. However, given the short notice for this hearing, the conflict with a major water conference this week in California and the beginning of the irrigation season, we were unable to get the representation you requested.

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[*] Additional material referred to by Mr. Peltier can be found in the appendix.

We encourage even broader input at a hearing on S. 484 in the CVP service area of California. Cities and urban communities served by the CVP should be given access and be heard from in the hearing process, as should rural communities, farmworkers, allied agricultural interests, other water project representatives and banking interests.

Senator Bradley earns our praise for his commitment to an open and deliberate process for considering S. 484. The CVP has been decades in the making, change must be gradual, staged and well defined so as to avoid harmful societal and economic impacts. We trust this committee recognizes the need for a process which achieves change without causing damage. Certainly when you open this process to the broader public you will hear frantic and emotional appeals, you will hear horror stories of impending doom, and you will see fear and anger on the faces of those who testify before you.

We are all afraid of the unknown changes, especially when we know the changes will affect the resource which makes possible our way of life—water. The process this committee undertakes must be considerate of the fear and sensitivity S. 484 has generated. We can have a productive dialogue on solving environmental problems, we can bring change. In large measure, it is process and reasonableness that will define success.

EXISTING ENVIRONMENTAL CONDITIONS AND PROGRAMS

Based on Senator Bradley's comments upon the introduction of S. 484, one is left with the clear impression that not only do we face an impending environmental crises, but little is being done to address these problems, hence the need for the CVP Improvement Act.

Relative to environmental conditions in our state; yes, there are numerous indicators that certain fishery resources are suffering (though there is only occasional agreement as to why) and have declined from historic levels. Waterfowl populations are also down and fish and wildlife habitat have been significantly damaged by the activities of man. But the Central Valley ecosystem is not on its "last legs", we do not live in a wasteland, our rivers and wetlands are not devoid of wildlife, polluted or of little value. In fact, by many measures our ecosystem is safe and healthy, even in this, the fifth year of unprecedented drought.

We do have a lot of work to do in restoring the habitat to enhance its "carrying capacity" to support more wildlife. We need to find ways to better manage our total water system and we need to better understand the problems and needs of fish and wildlife.

A tremendous amount of work is currently underway to resolve existing problems. This work is spread over virtually every federal and state resource agency with responsibilities for these matters. Of obvious concern to this committee is the work of the U.S. Bureau of Reclamation. Listed below is a rundown of work efforts or agreements developed that directly address the resolution of environmental problems:

—The Trinity River Basin Fish & Wildlife Restoration Program
—The Red Bluff Diversion Dam Fish Passage Program
—Shasta Temperature Control Structure
—Iron Mountain Mine Superfund Site/Spring Creek Debris Dam
—Nimbus Fish Hatchery Modernization
—Winter Run Salmon Management
—Sacramento River Salmon Spawning Gravel Restoration
—Sacramento River Fish "Flush"
—Sacramento River Temperature Operations
—Delta Modeling
—The Coordinated Operation Agreement
—The Interagency Ecological Study Program
—Suisun Marsh Agreement
—Delta Water Management Study
—South Delta Water Management Agreement
—Offstream Storage Investigation
—Tracy Pumping Plant Fishery Impact Mitigation
—Offstream Storage on Wetlands
—Stanislaus River Fishery Investigations
—San Joaquin River Fish & Wildlife Habitat Improvement

—Refuge Water Supply Investigation
—Temperature Model Studies
—Central Valley Fish & Wildlife Management Study
—Fishery Coordination Meetings
—Bay/Delta Hearings

GENERAL CONCERNS WITH S. 484

We have three general concerns with S. 484. These concerns are: (1) Uncertainty, (2) Loss of water, and (3) Consistency.

Traditionally we have identified a fourth concern: divisiveness. And certainly S. 484 will be divisive . . . it has already proven to be a complicating factor in ongoing efforts in our state to resolve environmental problems. Unfortunately, divisiveness seems to characterize any effort to bring fundamental change, this seems to be the nature of our system of law making.

UNCERTAINTY

On the issue of uncertainty—S. 484 is replete with policy decisions which would decrease the certainty and reliability of the CVP to provide the historic benefits that have defined its place in the infrastructure of California.

The uncertainty related to the elimination of long term water supply contracts is the most egregious assault on the water management system in California that can be contemplated (short of dismantling the project). This uncertainty will harm customers, agricultural, urban and industrial.

For urban water suppliers uncertainty relative to the next years' supply is intolerable, to say nothing of the need for certain supplies for planning purposes on into the future. Reliability is of premier importance to meeting residential and industrial needs. Public health and safety would be compromised and private business investment would be diminished. It is critical that this committee understand the very powerful and complex issues related to the reliability of water supplies in the urban sector.

Within the agricultural sector the impacts of one-year contracts are quickly predicted and damaging consequences easy to identify:

Impacts on Agriculture

Farmland Values. California's ongoing drought demonstrates the crippling effects of a limited water supply on the value of land, the farmer's primary asset. Where water supplies have been reduced by drought, farmland values have dropped by an estimated 25-30 percent or more in some cases. Limits on contracts would have a similar adverse impact. Even speculations over reduced term contracts can reduce land values as we saw in the political attacks on the renewal of Friant Division Contracts.

Credit Decisions. Limiting contract terms will introduce an element of uncertainty and risk for investors and lenders which would affect loan terms and the availability of credit. Shorter water contracts will result in shorter repayment periods and higher annual costs to farmers. The ultimate result will be a reduced commitment to agriculture.

Cropping Decisions. Limiting could also halt the trend toward production of higher-value, permanent crops (such as fruit orchards and grapes) which generate significantly more higher paying jobs and in broad terms much greater contributions to the agricultural economy than annual crops.

Water Supplies. Like the farmers, local irrigation districts would find it difficult to obtain financing to make system improvements necessary to further increase operational efficiency and water conservation—so vitally important in this drought-prone state.

Impacts on Local Economies

The adverse effects on the agricultural economy would further spread to the surrounding local economies of the communities of the Central Valley, already hard-hit by drought and freeze. Among the impacted would be:

Tax Bases. An uncertain water supply would devastate local economies by reducing Central Valley communities' tax bases, which have been broadened and stabilized over the years by the steady water supply.

Nonagricultural Businesses. All of the valley's businesses are dependent upon the health of the agricultural economy. Limited water contracts would damage other trade and service industries, since many purchases are made using income produced on valley farms.

Social Problems. The cutback in farming activity would be accompanied by increased unemployment. A huge burden would ~~be placed~~ on city and county services as welfare payments, along with crime rates and other problems associated with high unemployment, increase.

LOSS OF WATER

S. 484 is characterized by policy decisions that will take water away from existing uses and direct it toward fish and wildlife uses. As we have stated in previous testimony, we strongly support the resolution of fish and wildlife problems. But we can never accept the notion that these problems will be solved by taking water away from existing uses. Existing uses must not only be maintained, but expanded.

Let me remind the committee that the CVP has about one million acre feet of unallocated yield. There is also in excess of four million acre feet of requests for additional water into the Bureau today. Many of these requests are based on expectations intentionally created by the United States two or more decades ago. These requests include water for urban, wetland, state water project and agricultural uses.

Looking ahead, one might argue that the remaining yield of the CVP is adequate to address existing needs within the project. However, when we look beyond the CVP service area enormous unmeetable needs for water loom in California's future. S. 484 ignores those needs, and if anything, makes our future problems worse by causing shortages for existing uses and confusing water management in California.

CONSISTENCY

Our system of managing surface water supplies is exceedingly complex. In fact, the CVP constitutes just one of over a hundred different projects built over the last one hundred years. Most of these projects have identical roles . . . to provide water, electricity and flood protection. They have all contributed to convert our naturally semi-arid landscape to one which not only produces great amounts of food but provides an appealing environment for one out of ten Americans to call home.

Under the laws of our state, laws we must point out that the federal government has consistently deferred to in water project development and operation, one has the right to use water only so long as it is put to a beneficial use. It is the terms and conditions under which water is made available which define the ability of water users to put water to the highest beneficial use.

There is very little water used in California today which is not provided to the end user under a very strict set of rights and contracts. These rights and contracts are the glue that holds our water system together. And while they often appear in varied forms, it is these rights and contracts that give the end user assurance that she can invest on the solid word that water will indeed be available next year to allow her to begin repaying her investments.

Historically the CVP has been consistent with other California projects by providing water under long-term contracts. S. 484 would set the largest water project in California apart from all others, we would have a new and unique standard of assurance: none.

With so many different water projects in our state, operational consistency is also of vital concern to all projects which rely on our shared water resources. Water projects need not be constantly operated in the same fashion, in fact, weekly, daily and hourly changes to conform with changing conditions downstream are essential, but they must be consistent and reasonably predictable.

Since the new guiding principles in Section 6 of S. 484 are not defined, we fear the uncertainty of just how the project will be operated will be increased enormously. The likelihood that these standards will be in conflict with other projects is very great. At a minimum, this uncertainty will decrease the efficiency of our overall system and water will be wasted, or at best, not put to the best possible use for human and environmental needs.

SPECIFIC CONCERNS WITH S. 484

It is our intent to reserve specific, line-by-line comment for the field hearing on this bill in California. We will, however, focus on one part of S. 484 and have attached a section-by-section commentary on S. 484 to this testimony.

WATER MARKETING

Section 5 requires all new or amended contracts for CVP water to contain provisions for the transfer of project water by individual recipients of project water. S. 484 recognizes the "mutual benefit" nature of our water districts and begins to reasonably address those concerns. However, the measure totally ignores third-party impacts, would price CVP out of any drought emergency water bank established, and extorts a counter-productive sum of 25% of the transfer for environmental uses.

In California, we have advanced significantly over the last few years in our acceptance of the notion of water marketing. We have realized that as a concept, if the words "voluntary", and "win-win" are attached to a transfer, we have a new and useful tool to further assist in the tortured process of balancing between areas of surplus and areas of deficit.

But, as we have moved from outright opposition to acceptance, we have realized that this notion is very, very difficult to implement in a manner consistent with the principles of sound public policy.

It is a relatively simple proposition to find willing buyers and willing sellers. It is, however, difficult to identify third-parties that will suffer from the transaction and nearly impossible to gain their approval of a transaction when they are affected. S. 484 deals with these third-party impacts by ignoring them.

And just who might these third-parties be? For starters, farmworkers. The people who drive the tractors and harvest the produce associated with the use of water which the seller is willing to part with. Without water their jobs are gone. Then we have the seed salesman, the fertilizer and pesticide dealers, the packing-house workers, the marketers, the truck drivers and all of the myriad of businesses which they frequent that will suffer.

The 25% surcharge on sales will effectively price CVP out of the market for sales in normal years. Take the example of trying to move water from the Sacramento Valley to the San Francisco Bay area. First, you deduct from the amount normally applied to the field 20%—this is the normal return flow to the system. Then you deduct up to 30% of the amount as the quantity required for salinity repulsion in the delta, then add the S. 484 surcharge of 25%. The buyer will receive only 25% of what they are paying for. The price goes up and up—out of the market.

In a drought emergency as experienced this year, the artificial price inflation of 25% will virtually assure that cheaper sources can be found elsewhere, thus the CVP will not be able to help meet critical urban needs.

SUMMARY

Redirection of the Central Valley Project will affect the lives of the people who have settled the great Central Valley of California. We all must strive to protect the security and livelihoods of these people.

As we all work together to repair past damage from the activities of man, we cannot loose sight of the need to balance human and environmental needs. This balancing process will be difficult, but we cannot choose a simplistic course—a course that fails to balance will cause hardship and in the end, fail to deliver benefits.

Thank you for the opportunity to present our views.

Senator **Bradley**. Thank you very much. Mr. Moss.

STATEMENT OF RICHARD M. MOSS, GENERAL MANAGER, FRIANT WATER USERS AUTHORITY, LINDSAY, CA

Mr. Moss. Thank you very much, Senator and Senators. I appreciate the opportunity to be here today. I also will try to shorten my comments.

I would like to highlight a couple of aspects of my testimony, however, and focus on those since I believe they are very important.

In my testimony I spent a great deal of time focusing on the economic impacts of eliminating the use of long-term contracts. These impacts will be felt most directly by our farmers and by our landowners, and it is critical for you to realize the importance of an assured, long-term water supply in California.

The value of the land is directly tied to the availability of water. I can show you numerous examples of side by side parcels of land that vary in their value by as much as $3,000 to $4,000 per acre, with the only difference being, one is within the boundaries of an irrigation district with a good water supply, and the other has little or no access to water.

The people of the Friant Division, not just the farmers, but the packing houses, the truckers, the canners, have all invested billions of dollars into the necessary infrastructure to support the creation of the greatest agricultural economy in the world.

These investments were predicated upon the commitment of the Government of these United States, to not just provide a water supply for the original 40-year term of these contracts, but to renew these contracts in full at their conclusion. This trust, this commitment must not now be abrogated.

One other thought relative to the importance of a water supply and the certainty of a water supply, there has been much testimony provided here today about the need for new relationships between urban and agricultural water users, wherein urban suppliers would invest in improved water management capabilities in the agricultural sector, in exchange for all or part of the resultant water yield.

We have an excellent example of this kind of effort already underway in the Friant Division, where the Metropolitan Water District of Southern California is negotiating with the Arvin Edison Water Storage District, a Friant contractor, to pay for the construction of additional water delivery and ground water recharge facilities, in order to effectively bank water in Arvin's underground for use by metropolitan in dry years.

Arvin's water service contract with the Friant Division will expire and require renewal in 1995. One of the most significant problems facing the implementation of this desirable project, the exact kind of thing that we have heard about today and have heard about before is the renewal of Arvin's contract and the certainty of water supply provided by and through that contract, because without certainty there will be no deal, a deal that everyone otherwise believes is good.

I also spent a great deal of time in my written testimony talking about the goods things we are already doing in an effort to restore the environmental rivers on the San Joaquin River, environmental bayous on the San Joaquin River.

I cannot emphasize enough the importance of a consensus-type of approach to finding answers to the problems. I am confident that balanced, reasonable and effective solutions to many of the problems facing the river will be found through this program.

It will not be easy. It has not been easy and it will not yield everything that everybody wants, but it will generate solutions that have a good chance for being implemented, without the otherwise certain prospects of protracted litigation, of little or no good to the river and its environment or to anybody else.

There is only one other topic I would like to touch briefly on here today and that is the real potential for water savings, agricultural water conservation in the Friant Division. There are two principal ways in which water is inefficiently used in the practice of irrigation. One is putting too much water on the field and allowing it to run of the end of your field. The other is to putting too much water on the field and allowing it to deep percolate past the root cell.

In the Friant Division we have virtually eliminated tail water-runoff some years ago with the installation of tail water return systems, and recirculation pumps, as well as through the advent of laser leveling technologies.

Also, in the Friant Division, nearly all of the water passing the root zone as the result of over-irrigation makes its way to a useful ground water source to be captured and reused.

In fact, in big water years, over-irrigation plays an important part in our groundwater recharge and conjunctive use efforts. Thus, the final measure of the availability of conserved water for use outside of the Friant Division service area is easily determined by the rise or fall of our groundwater reservoir.

If there is real water to be saved, then it will show up as a long-term aggregate to our groundwater reserves. This year, we are pumping from the greatest depth of groundwater we have ever experienced. Over the past 4 years, we have drawn in excess of 3.5 million acre feet of water from our underground reservoir, conclusive proof that we need more water, not less, or face the prospects of ultimately taking land out of production.

That is why the notion of giving up 10 percent to 30 percent of our water supply in order to obtain long-term contracts we find so offensive. Conservation to us is not a realistic alternative to make up that difference. Reducing our water supply hasten supply of our groundwater resources and increases the amount of land that will ultimately have to be taken out of production.

Again, thank you very much for allowing me the opportunity to be here today.

[The prepared statement of Mr. Moss follows]:

Prepared Statement of Richard M. Moss, General Manager, Friant Water Users Authority, Lindsay, CA

Good afternoon Mr. Chairman and members of the Committee. It is my pleasure to appear before you this afternoon on behalf of the members of the Friant Water Users Authority in an effort to help in your understanding of the potential impacts of the proposed "Central Valley Project Improvement Act".

My name is Richard M. Moss and I am the General Manager of the Friant Water Users Authority. The membership of the Friant Water Users Authority is composed of irrigation districts, water districts and municipal utility districts that contract for water from the Friant Division of the Central Valley Project. These districts serve the water needs of approximately 15,000 farmers and 1 million acres of farm land on the east side of the San Joaquin Valley in California.

The Friant Division of the Central Valley Project is unique in its combination of climate, soil and most importantly water which allows for the proliferation of a tremendous variety of crops. Fresno, Tulare and Kern Counties (which make up the majority of the Friant Division) consistently place as the top three agricultural producing counties in the nation. Leave it to be said that the farm land that makes up the Friant Division is some of the most productive in the world and truly must be considered a national treasure. Leave it also to be said that this same land would be comparatively useless in the absence water for irrigation, the majority of which comes from the Friant Division of the Central Valley Project.

My statement today will primarily focus on two issues. One is the effects of an uncertain water supply on our local economy and the certain impacts of this legislation in that regard. The other is to provide you with a better understanding of some of the efforts already underway to address many of legitimate concerns that are purported to be the reasons for the introduction of S. 484.

WATER SUPPLY UNCERTAINTIES

There are two principle aspects to this legislation that will be tremendously damaging to the agricultural economies that are so dependent upon the waters of the

Friant Division of the Central Valley Project; the virtual elimination of water service contracts with a term greater than one year in length and the injection of fish and wildlife purposes as having an apparent priority over existing beneficial uses.

Together these will cause great uncertainty as to the dependability of our water supply. This uncertainty is directly and immediately translated to severe adverse economic impacts in many ways. Let me describe a few of them to you.

Based on our conversations with lenders serving our agricultural community, there is an increasing reluctance to make long term loans to growers in our area without a demonstrably adequate long term supply of water. This heightened concern has been brought about as a result of several things including the controversy surrounding the renewal of Friant Division water service contracts and the impacts of five years of extreme drought.

Several lenders have made it clear that an immediate effect of shorter term water contracts will be shorter term loans, i.e., loans which will not exceed the term of the water contract; shorter repayment periods typically mean higher annual costs to borrowers. Contracts of only one year in length provide no long term certainty at all, calling into question the ability of our growers to obtain financing at all. We have also been told that new loans will carry increased interest rates, reflecting the perceived risk associated with an increasingly uncertain water supply.

Higher borrowing costs will make long term investments by growers in land acquisition, development or rejuvenation of permanent plantings, and the installation of improvements (such as water management and conservation facilities), much more costly. If costs cannot be spread over enough years, the expense associated with long term investments simply becomes prohibitive.

It is therefore predictable that shorter term water contracts will lead directly to reduced economic commitments to agriculture. At a time when it is apparent that the future of our economy, and the economy of these United States, is in need of moving toward long term investments in our infrastructure and in need of business strategies geared toward long term commitments and returns, we are faced with the potential as detailed in S. 484 for induced uncertainty that dictates the use of short term planning and short term goals.

It is also predictable that this uncertainty will lead to a decline in land values. The value of agricultural land in the San Joaquin Valley is directly tied to long term water availability; there are numerous examples in the Friant Division of adjacent parcels having substantially different values which are differentiated only by the inclusion of the more valuable parcel within the service area of a Friant Division contractor. The lack of an assured long term water supply therefore, in and of itself, will have the effect of reducing property values.

Importantly, the effects of this probable decrease in property values, when combined with the likely difficulties to be faced by growers in obtaining affordable long term financing, will have a sinister synergistic effect. Land is usually the sole source of collateral for long term agricultural loans; decreased land values would mean less borrowing power. When coupled with higher borrowing costs, declining borrowing power will almost certainly further reduce growers' ability (and willingness) to make long term investment in agriculture, further deflating property values. The result is a continuing downward spiral of land values and the associated agricultural economy.

The individual irrigation and water districts now receiving long term water supplies from the Friant Division are proud of the efficiency and water conservation measures implemented throughout the Friant Division. However, many districts' systems are in need of rehabilitation, and/or can be expanded to further improve conservation (for example, through the construction of additional groundwater recharge facilities). Distribution system improvements and the construction of new facilities are costly and must be financed over a term sufficient to make them economically feasible. The term of a district's water contract will set the term of the financing it can acquire for capital projects since, like individuals, public agencies will likely be unable to acquire affordable financing for a term which exceeds the term of its water contract. To the extent district financing becomes unaffordable or unavailable, these desirable projects cannot be undertaken. It would be unfortunate, and inconsistent with maximizing the efficient use of water, to preclude these projects due to the absence of an assured water supply as has been historically provided through long term contracts.

The adverse impacts of an increasingly uncertain water supply will not be limited to the users and providers of agricultural water. Currently, the City of Orange Cove and the City of Lindsay utilize Friant Division surface water for domestic deliveries. The City of Fresno utilizes its Friant Division entitlement to recharge groundwater and is pursuing treating its Friant Division supplies for direct delivery to its domestic water users.

In addition, most of the other local municipalities in the Friant Service area rely solely on groundwater pumped from our severely overdrafted groundwater basin. Without groundwater recharge as provided by the Friant Division contractors, the underlying groundwater basin would become more depleted and eventually unusable.

Over 320,000 individuals currently rely upon Friant Division deliveries for part of their domestic needs. New and improved facilities are and will be needed to meet growing demands. As with the districts providing agricultural water, municipalities will not be able to afford to construct new facilities if only short term financing is available as the result of a reduction in length of water contract and/or as a result of the increased uncertainty of the underlying water supply.

Additionally, any economic decline within the Friant Division will also be felt by the Federal government. By virtue of their current long term contracts for water service, Friant Division water contractors have an obligation to repay their portion of the capital cost of constructing the Central Valley Project, and many have additional repayment obligations to the Federal government under a variety of Federally sponsored loan programs. A contractor's ability to repay the Federal government is dependent on its ability to generate revenues through assessments and water charges. To the extent that restrictions on water contracting and other uncertainties as a result of S. 484 cause an economic decline within a contractor's boundaries, that contractor's repayment ability is diminished to the detriment of the Federal government.

Other significant impacts of a decline in San Joaquin Valley agriculture on the Federal government include the potential loss of income tax revenues of millions of dollars per year from the loss of valuable agricultural production. This production also would otherwise help to ease the country's trade deficit. Further, a downward economic spiral in our agricultural economy would result in substantial defaults under existing long term financing, inevitably leading to a high incidence of foreclosure. Because Federal Land Bank is the single largest long term lender on agricultural property in the San Joaquin Valley, that lender (and therefore the Federal government), would be particularly hard hit by these defaults and foreclosures.

CENTRAL VALLEY ENVIRONMENTAL RESTORATION EFFORTS

It would appear that the principle reason behind the introduction of the Central Valley Project Improvement Act is one of providing a focus on and impetus towards fish and wildlife restoration and enhancement. We are and have been supportive of these broad objectives of this Act, but believe that they can only be achieved though consensus based efforts using defined, achievable and equitable measures.

There are a number of these types of consensus based efforts underway, involving all of the potentially impacted people, working together, each contributing in some way towards resolution of the problems of the water related environment of the San Joaquin Valley.

I personally have been involved in a couple of these efforts. Of greatest importance to the users of Friant Division water supplies are the efforts of the San Joaquin River Management Program.

What was initially begun about two years ago as an ad hoc effort of a group of individuals and agencies concerned about our inabilities as individuals to improve the existing conditions of the San Joaquin River, has now been formalized by the State legislature into a clearly defined and comprehensive program. The stated objective of this program is the development of comprehensive and compatible solutions to water supply, water quality, flood control, fisheries, wildlife habitat and recreation needs of the San Joaquin River. This program was modeled after a similar very effective effort on the Sacramento River.

The consensus basis of this effort is demonstrated by the fact that over 450 agencies and organizations have been contacted to participate in the program. Public participation has been and will continue to be encouraged throughout the process.

Through the San Joaquin River Management Program we have been identifying and categorizing the various problems of the San Joaquin River and its tributaries up to the first major dam on each tributary. The monthly meetings of the Program participants have provided a forum for coordination and optimization of needed studies. They have also served as a sounding board for potential solutions and for coordination of remedial actions.

The San Joaquin River Management Program will be providing our first annual report to the California legislature in October of this year. A final report of our findings with specific recommendations for further actions will be delivered to the Legislature by January of 1995.

The United States Government has been participating in these efforts through representation by several agencies including the Bureau of Reclamation, the Fish and Wildlife Service, the Geological Survey, the National Marine Fisheries Service, the Army Corps of Engineers, the Environmental Protection Agency, and the Soil Conservation Service.

We have also suggested to the Secretary of the Interior that the efforts of the San Joaquin River Resource Basin Management Initiative that he announced in the fall of 1989, not be conducted separate and apart from the efforts of the State lead San Joaquin River Management Program and instead be integrated into the Program. We believe it is currently his intentions to do this.

I cannot help but question the wisdom of trying to now overlay unstudied Federal mandates and conditions on the efforts we have underway, as would be required by S. 484. We are already working under self imposed mandates to improve the conditions of the San Joaquin River. We are also, however, providing a forum for balancing the social, economic and environmental needs. The consensus basis and the balancing aspects of our efforts would clearly be lost and abandoned if S. 484 were to become law in its current form.

The people of the San Joaquin Valley are making reasonable progress in trying to correct the mistakes of the past while planning for the future. We have established the strongest agricultural economy in the world which is now affording us the opportunity to optimize the human and environmental uses of our resources. The Federal government has figured significantly in the development of our Valley through assistance as has been historically provided through such programs as the Federal Reclamation Program. It mustn't now move rashly and ill advisedly to undo all the good that has been created.

Please come to the Central Valley and hold hearings to find out in greater detail the needs of our Valley and what we are already doing to address our problems. There certainly will be a need for Federal legislation and a continuing roll for the United States Government, but it is not embodied in the current language of S. 484.

I very much appreciate your interest and willingness to listen today.

Senator **BRADLEY**. Thank you very much, Mr. Moss, very interesting testimony.

Mr. Vice.

STATEMENT OF BOB VICE, PRESIDENT, CALIFORNIA FARM BUREAU, SACRAMENTO, CA

Mr. **VICE**. Senator Bradley, Members of the committee, I am a farmer from San Diego County. My name is Bob Vice, and I serve as the president of the California Farm Bureau Federation.

The California Farm Bureau is the largest general farm organization in California with 47,000 family farmers. I am pleased to be here to represent them and our views about the Central Valley Project and the legislation you have proposed.

I have a full statement. I will just paraphrase part of it. There are of course areas of objection, as well as areas that we support.

Senator **BRADLEY**. Just tell us what you object to.

Mr. **VICE**. I think that in particular, customers of the Central Valley Project would be gravely impacted by your proposal to bar removals for one than a year. You have heard that today, and I did not expand on it, but year-to-year contracts will just not provide the continuity and the reliability of water supplies that farmers needs, and that bankers need.

I am aware of the provision of section 4(c) of your bill that would allow 20-year contracts for farmers if they agreed to forfeit 20 percent of their water. This would be an unbearable price for farms to pay and certainly, it would not assure their supplies. They would have no choice in doing it, they have to do that in order to get the amount of water that they are going to need in order to at least adhere to the bank and some of the provisions they have imposed on us as farmers.

The Farm Bureau supports the concept of water transfers, when they are done on a voluntarily basis. However, as you have heard here many times today, third party water rights and the water rights of the point of origin on surface and ground water must be evaluation and appropriate protection for those entities be assured.

Regarding the proposal to establish a Central Valley Project Transfer Advisory Committee and its work, as others have said here today, in the upper Sacramento River.

Maybe in closing, I would like to hit maybe the point, and I was glad to hear you say in your opening statement—I believe I heard you say that you would look seriously at the provisions provided more storage, because it says in the act, 8(i) of the bill, it says, this act does not and shall not be interpreted to authorize construction of water storage facilities.

And I do not understand how we would avoid the very thing, the component that is going to have to be a part of any solution for the water problems of California, which is construction and new facilities.

To provide water, as Senator Cranston said, to 2,000 new permanent residents everyday moving in, and we add a city the size of San Francisco every year, and in the last 20 years, no significant new projects were built to accommodate them. It makes it a terrible situation to try to control, when again the concept the not having new storage facility, it will not solve the problem unless we address those.

In the interest of time, I will stop my remarks there and be glad to take any questions with any time that might be left.

[The prepared statement of Mr. Vice follows:]

PREPARED STATEMENT OF BOB L. VICE, PRESIDENT, CALIFORNIA FARM BUREAU FEDERATION, SACRAMENTO, CA

Senator Bradley, my name is Bob Vice, and I am the President of the California Farm Bureau Federation (CFBF). CFBF is the largest general farm organization in California, with over 47,000 farm families. I am pleased to be here today to represent them and their views on the Central Valley Project legislation that you have proposed.

As you can well imagine, we have a strong interest in this legislation, as the CVP is an integral component of California agriculture. The CVP has played a major role in making California the number one agricultural state in the nation for the past 43 years. What has brought me here today is our belief that your proposal, if enacted in its present form, would greatly diminish California's agricultural capacity and devastate the farmers and ranchers who have invested in the CVP and been its major customers since its inception.

We do share your concerns regarding fish and wildlife and water quality in California, and we support expanding the purposes of the CVP to address problems in those areas. That is important. What we object to is the means by which you would achieve those improvements. Simply put, agriculture would be forced to bear too much of the burden.

In particular, agricultural customers of the CVP would be gravely impacted by your proposal to bar contract renewals for more than one year. Year-to-year contracts will not provide the continuity and reliability of water supply that farmers need. Farmers cannot invest in long-term, permanent crops, such as orchards, with no assurances on available water.

I am aware of the provision in Section 4(c) of your bill that would allow 20-year contracts for farmers if they agree to forfeit 20 percent of their traditional supply. This would be an unbearable price for farmers to pay for an assured water supply, but they would have no choice as not doing so would force farmers to gamble from year to year on whether or not they will have enough irrigation water to sustain their crops. While farming is by its very nature always a gamble, the increased uncertainty that would be brought on by Section 4(c) would have drastic repercussions for California's agriculture and its rural economy.

If water must be taken from agriculture, we suggest that it be done on a voluntary basis. Incentives for conservation and permitting water transfers are two possible mechanisms.

Farm Bureau supports the concept of water transfers when they are on a voluntary basis. However, potential impacts on third party water rights and on the water needs of areas of origin of surface and groundwater should be evaluated, and appropriate protections of those entities should be assured.

We note that your proposal would permit transfers of water under contract to any water agency and other entities regardless of price, duration or location, with a 25% portion of the transferred water or the financial proceeds of the transferred water dedicated to fish and wildlife restoration. We feel that the 25% transfer tax would be a significant disincentive to transfer water, however.

In regard to the $30 million you would have the Secretary of Interior collect annually from CVP water and power customers to pay for fish and wildlife restoration objectives, we feel that this would be particularly burdensome. CVP customers would be hard pressed indeed having to pay an additional $30 million per year. Not only is this not feasible, it is not justified. The expense of fish and wildlife restoration should be shouldered by the entire population, rather than CVP customers only.

We also have strong reservations regarding the provision that would authorize special 20-year contracts for the sale of 100,000 acre-feet of uncontracted firm yield for municipal and industrial purposes. In essence, this says that the water would be sold to the highest bidder. This brings to mind the classic problem in California of water "flowing uphill towards money." While it certainly would raise revenues that could be directed to fund fish and wildlife restoration, from a public policy standpoint there has to be a better way.

Regarding your proposal to establish a "Central Valley Project Transfer Advisory Committee," we are supportive of the concept. As you well know, water problems in California are exceedingly complex. If responsibility for the CVP could be completely transferred to the State of California, or perhaps to the water and power customers themselves or to a quasi-governmental entity, it is possible that solutions would be more easily arrived at. Farm Bureau has long felt that state and local issues are best dealt with at the state and local level. The Upper Sacramento River Task Force and the San Joaquin River Management Program are two prime examples.

In closing, I call your attention to Section 8(i) of the bill, which says "This Act does not and shall not be interpreted to authorize construction of water storage facilities." Senator, I do not understand why you would avoid the very thing that must be a component of any true solution to water problems in California: construction of new storage facilities.

To provide water for California's growing population, which increases by 2,000 people a day; to produce their food and fiber needs; and to address the state's fish and wildlife problems, it will require either more rainfall and runoff, which we have no control over, or the capture and storage of a greater portion of the rainfall and runoff that we do have. That is something we do have control over. We have long recommended that authorization of new water storage and management facilities be included in any legislation that is intended to address water problems in California.

Senator Bradley, thank you for considering these comments, and I welcome any questions you might have.

Senator BRADLEY. Let me thank you. I find sometimes that the best panel is the one that is under the greatest pressure, because they then can tell you what is exactly on their minds. It is very helpful to me.

Senator Seymour.

Senator SEYMOUR. I would just like to ask very briefly and quickly of Mr. Vice, what kind of economic impact might there be in the agricultural community, assuming that they all choose to go for 20-years contracts to the 40-year, with 20 percent of the top of that, contract.

Any estimate as to the economic impact?

Mr. VICE. I think if that were to happen immediately, I think we could all assume that the farmers, because water—I do not care how little or how much water costs you, it is a input cost.

Farmers are always looking for a way, naturally, those like myself, who pay $400 an acre foot for it, are looking more rapidly at ways to save water, but all farmers are looking at ways to save water, it is an input cost.

And I think that happens, we have many, many, and some of them are cited here today: laser leveling, drip irrigation, lots of ways that we can save water. They do not happen overnight. I think if you were to be forced into a 20 percent savings on water, that many areas, this means doing 20 percent less farming than you were doing last year before you signed that contract.

I do not think it takes an Einstein to figure out if you take 20 percent of our any community, if that is what happens and some of the areas that we are talking about areas where the main force of economic viability is agriculture, whether it is the guy who sells the pick-ups or the guys who sell the fertilizers, that sells the stores, shoes in a store in Hanford, does depend on the agriculture economy. I think it would have a very devastating effect.

Senator SEYMOUR. Thank you.

Senator BRADLEY. Senator Burns? You do not have any questions, do you?

Senator BURNS. Yes, I do. I have a couple of questions. Mr. Vice, I want to congratulate you in working with the Board of County Commissioners—I do not know what advisors. Down in San Diego Country, I had an opportunity to visit with one of those members when I visited the Marine Corps Recruit Depot down there and you all realized you had a water shortage and how you worked that out between you and the people in the urban areas, obviously, there is no doubt about it, and the amount of cooperation that they got from their military installations in San Francisco.

It was a piece of work that I think you should be very proud of.

Mr. VICE. Thank you. But we keep talking about off-stream storage and more water, and we all feel that it is important. What do you think your chances are in California, to identify some areas where maybe some off-stream storage would be built.

Mr. VICE. Well, we had two projects that are, by everyone's estimate, too perfect if there is such a thing, areas that this could be done. One is Los Vaqueros and the other one is Los Banos Grandes. Both of those said minimal because they are off-stream, relatively small dams that would be needed to close the canyon in.

Those projects have been identified as being the most viable, immediate projects that could be built, good yield, relatively deep, so that the surface area is relatively small for evaporation, and yet, we have been, I guess about 10 years trying to get those done.

Senator BURNS. What is the roadblock?

Mr. VICE. Environmental impact reports, in terms of, there is no endangered species I am aware of, but just habitat for species that need to be replaced or find another home for, basically environment impact problems.

Senator BURNS. You see, here is where I find there is a real problem. Everybody is concerned about the fish and the wildlife and wants to take 20 percent of the way from whatever project, and they will agree with you that we need more water and more wetlands, and yet, if you talk about off-stream storage, where you kills those reservoirs in the spring run off and to release that water to assure in-stream flow, for fisheries and everything else, we have the same group that will not let us build that facility.

Now I find that a real contradiction. Am I wrong in that assumption? You tell me if I am wrong and then you prove it to me, because I have an open mind, because we are looking at a situation where you have all these people and if we do not provide more water for all of the people, the people are going to take that water, I do not care, and they "ain't going to think about no face."

Mr. PELTIER. In some ways, Senator, we look at and it is appropriate to look at these environmental values in the surge, the increase in the demands for waters as well as new demand. They were considered minutely, but the rush was, let us irrigate the land and makes jobs for vets and that.

So they were not considered then. Now that we are considering then now. In a sense they are a new demand on the system and the simplest, least controversial way in terms of dealing with existing water users, would be to provide a new water supply, development new off-stream storage, surface or sub-surface, and we recognize that and push that continually.

One of the great confounding factors we have though is new supplies are very, very expensive, compared to existing supplies. Supplies that were built, developed for facilities built in the 1940's, so it is a complicated issue in terms of how the economics break out and the value that we place on those resources.

If I could——

Senator BURNS. You may, I brought my supper.

Mr. PELTIER. You asked the question about wetland losses. It is very well documented that the vast, vast majority of wetland losses, taking us from 4 million to 5 million acres of wetlands in the central valley down to 400,000 to 500,000 acres occurred before even Shasta was built.

These wetlands were lost as a result of farming primarily but not project related farming. It was reclamation of the delta, reclamation of Tulare Lake, construction of the Sacramento River Flood Control Program, and so they were lost because of ag, but not CVP ag per se.

On the issue of spawning habitat, yes, the only numbers I have seen on this are California Fish and Games numbers, and the numbers are something like, before the white man arrived, we have maybe 6,000 miles of spawning habitat in the central valley drainage.

Today, we have about 300 miles of spawning habitat left. By 1928 we had about 500 miles. So by 1928 we were down to 500 miles, and there is an increment that was lost as a result of the construction to Shasta Dam and there is no doubt, real valuable spawning habitat too.

But I think that gives some perspective on—it has been, agricultural development occurred very rapidly in California compared to the rest of the West, in the last 1800's, and that is when the land conversion was taking place.

Senator **Burns**. Mr. Fontes, there is an open commitment of CVP power at project rates for fish and wildlife, taken with a $30 million surcharge. What is the potential impact of the cost, available power for sale and the ability to repay those project costs?

Mr. **Fontes**. It is easier to deal with the $30 million since that is a known number, so let me deal with the $30 million first.

If the customers that buy power from the project were to shoulder all of those costs, the entire $30 million, the ratio of that amount to the Federal, to Western's budget is about 15 percent.

So immediately, we would see a 15 percent, about a 15 percent increase in our costs. To compare that to the market today in Northern California, Western Area Power Administration is about 20 to 15 percent less than the market. So we are talking about moving Western right into the range that we produce power ourselves, PG&E, Bonneville Power Administration sells power in our area for that rate.

But what that says for the ability to pay, probably is not as important as what it says for the long-term competitive viability of the project.

Also, remember that we speak today for 14 consumer utilities, the Western Area Power Administration sells to over 80 individual customers in Northern California. We buy more than half of that power, but there are a lot of customers, including Federal Department of Defense installations, national laboratories, and other installations that get Federal power in Northern California.

The project rate impact is smaller and to be honest with you, since the bill does not do anything, does not say here is a specific program to do, it is really impossible to quantify. All we can say is that some of the power will have to be used to move water to the refuges. That will reduce the amount that is for sale for us through the project generation.

Western, it has to go out and buy that power on the market at a up-make value, so it is substantial. One example I could give you, we had some discussion earlier about the Trinity River diversions and Dennis Underwood announced the decision this morning about the 240,000 acres feet.

Our estimates in terms of dollars were $6 million a year for the Trinity diversion, if it were to go to 340,000 acres feet, so we are 100,000 acre feet short of that, so maybe $4 million a year for 5 years.

So we are talking $20 million just for that water to go into the Trinity. So these are substantial amounts of money.

Senator **Burns**. Mr. Moss, when you take 20 percent out of an economy, have you done any kind of an estimate? What kind of an impact would that have on your tax base in a certain county to provide services that are expected from the citizens of that country?

Mr. **Moss**. I think I can try to give you a relative sense of magnitude for what a 20 percent reduction would do to the economy. I just put some numbers, penciled down here and estimated what the value of the citrus crop in the Friant service area is as compared to the total value of agricultural production, gross agricultural production.

It equates to about 15 percent of the agriculture production in the Friant service area, which this year, of course, was totally wiped out. So I think in terms of a relative sense of magnitude, it would be something worse than what we are experiencing this year as a result of the December freeze.

Now the impact to local services, I am sure you are well aware of the situations that the counties are facing and the State is facing in terms of financial, fiscal crisis. A slow-down in the agricultural economy in the counties of California would, I am sure, push those counties which are now on the edge over the edge.

Senator BURNS. I have no more further questions. We have been joined by our good Senator from Oregon, Senator Hatfield, and I would ask at this time if he would have any questions or would like to make a statement.

Senator HATFIELD. Thank you, Mr. Chairman, and I would like unanimous consent to have a statement that I have typed entered into the record, and I would just make one or two observations.*

I am in the process, after about 3 years of introducing a comprehensive water policy proposal for this country, as we are now working, this committee, on a comprehensive energy policy for the nation, which ultimately will have to be linked to a comprehensive transportation policy for the nation, because there is obvious linkage.

Representing the State of Oregon, we have a very direct interest in the impacts of the management programs down in the State of California, the Central Valley legislation pending, and in many ways, and most specifically as it relates to the impact on the salmon.

Some of you may have been reading where we have at this time filed for an endangered specie, the sockeye salmon, an anadromous fish that spawns up the Columbia and its tributary.

In a few more days there will be four more petitions filed on various species in the chinook family of salmon. There are 126 more petitions on 126 more species and subspecies of salmon waiting to be filed.

Some months ago I held a hearing and invited the governors of the three Pacific Northwestern States to join in this so-called summit with representatives of all interest groups, all user groups, environmental groups and so forth.

And we tried to get ahead of the curve, out of our experience with the northern spotted owl impact on the forestry industry of our State, and it becomes very obvious that when you look at the salmon, you are not looking at just California, you are not looking just at Oregon, you are looking at a whole interrelatedness of the ocean with the rivers and the Japanese fishing policies and the Koreans and the Taiwanese and drift netting and a host of other things.

And I only want to indicate, Mr. Chairman—and I am just about through with my observations—that I do not think the salmon industry can be segregated or segmented as an interest of California alone or exclusively or of the interest of Oregon or Washington or any country.

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* The prepared statement of Senator Hatfield appears on p. 180.

And as we take this more catholic approach to the issue, I just want to say we have a very definite interest in the way in which the management of the Federal water projects in California impact upon my State of Oregon, just in the species of salmon, just in the life of salmon.

There are a lot of other reasons that I have an interest in this too, because going back, Senator Seymour, to the days when Governor Pat Brown was Governor of California and I was Governor of Oregon, he used to talk about water diversion to meet California needs of water, particularly of the Columbia River, and those were fighting words for me to hear.

This led Senator Jackson of Washington State and Senator Frank Church of Idaho, and myself, all Members of this committee to introduce a moratorium, a 10-year moratorium on any study, of any Federal moneys being used for any study of water diversion.

Well, Senator Jackson and I survived through a period of time, and it came time to renew that for another 10 years, which we did, and then Senator Symms from Idaho comes along and says, let us make it permanent, which we did.

But all I am saying is we cannot regionally or locally handle this great resource any longer, because it transcends State boundaries and regional boundaries, when you look at the water table of the Ogalala or 13 midwestern States and you look at what is happening in the Southwest, and my response to Governor Brown was, you send us your grocery list, we will grow the groceries far cheaper up in Oregon and then you do not have to transfer water to irrigate those lands.

You can make big developments out of that, to accommodate your population needs. I do not think that satisfied Governor Brown anymore than it satisfied Senator Seymour.

But I just wanted to thank the chairman for this opportunity to make some comments. You would think I was from the House, would you not?

Senator **Burns**. Thank you, Senator Hatfield.

I would reiterate where we are coming from. In Montana, we are upstream from everybody, so we have a stake in this too, on water policy, and I know Senator Hatfield has put in—well, without further ado.

Senator Seymour.

Senator **Seymour**. It is my understanding, and of course, the previous panel has dispersed and with my two colleagues who rightfully recognize the impact of what we are doing in California upon their States, I would just like to ask both of my colleagues, Senator Hatfield, knowing the pain and anguish that you have suffered and your State has suffered in the forest industries as a result of the spotted owl, I would hope that the State of Oregon would recognize that the solution to the management of the CVP, if imposed the way this bill suggests that solution be imposed, would make the economic challenges that you faced in your State, more straightforwardly and most courageously I would add, make that look like child's play.

And so I ask my colleagues to take a close look at how can we get to the objective that you want, I want to get the same objective as you do, and I want to work with you on that. But I do not want to see it laid at the feet of one industry, whose already on their knees as a result of an arctic freeze and a drought, and then have this come along and just decimate them.

Senator BURNS. Thank you, Senator Seymour.

I think there is a way that we can find where it will satisfy all the parties concerned, and I think working together we will do that.

The committee will be adjourned and we will have a hearing in California. And the record will stay open, at the call of the Chair.

Thank you for coming today. The meeting is adjourned.

[Whereupon, at 6 p.m., the hearing was recessed, subject to the call of the Chair.]

CENTRAL VALLEY PROJECT IMPROVEMENT ACT

THURSDAY, MAY 30, 1991

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Sacramento, CA.

The subcommittee met, pursuant to notice, at 9:20 a.m. in room 4202, the Capitol, Hon. Bill Bradley, presiding.

OPENING STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM NEW JERSEY

Senator BRADLEY. Welcome to the Subcommittee on Water and Power's third hearing on S. 484, the Central Valley Project Improvement Act. In Los Angeles and Washington we heard from 38 public witnesses, 5 Senators, and 3 Congressmen. We are scheduled to hear from quite a few more witnesses today. The hearing record is already almost 2½ feet thick. By the time we wrap up this afternoon, the Subcommittee on Water and Power will have concluded its most exhaustive investigation of a water project in recent memory.

In the course of these hearings the subcommittee has found an encouraging degree of consensus about what we are trying to do. Virtually everyone has agreed that the Central Valley Project can and should play a significant role in restoring and protecting Central Valley fish and wildlife. Virtually everyone agrees that decision making over restoration efforts should take place in California, not Washington, and follow the general direction of State law.

We have heard almost total agreement that something must be done to improve the operation of the CVP. There is total agreement that in considering change it makes sense to increase the CVP's flexibility and efficiency.

We found general, although sometimes grudging consensus, that some portion of the water now used by Central Valley agriculture will need to be available to this State's urban areas on a temporary and perhaps permanent basis and that the way to get it there is through voluntary transactions, not forced reallocation.

Almost everyone agrees that California State law should fully control the use of CVP water rights and that greater integration of the CVP and State Water Project makes obvious sense.

And finally, we all agree that the Central Valley's economy must be spared the disruption which would occur if we did nothing, and judicial takeover of the CVP under the Endangered Species Act followed, or there had to be unnecessarily abrupt reallocations of water, or unnecessary reductions in the length of CVP water service contracts.

It is important to note, as well, that almost everyone we heard from had high praise for Governor Wilson's handling of the crisis brought on by the present drought. I strongly agree with that praise and regret that the Federal project was unable to respond to the drought with similar flexibility and initiative.

Given this extraordinarily promising consensus, I am convinced that the Committee on Energy and Natural Resources should begin marking up S. 484 very soon. The 46 witnesses from whom we have heard did a fine job of describing the bill's strengths and weaknesses, and I am the first to acknowledge that amendments are in order. For example, Senator Seymour and I agreed at the subcommittee's last hearing that S. 484 needed amendment to make it clear that this bill does not give the EPA any new powers to override State water quality decisions.

At our May 8 hearing in Washington, I stated my willingness to consider other amendments to S. 484. The letters of invitation for today's hearing included a listing of those possible amendments along with some others.

Each of today's witnesses may, of course, use your limited time as you see fit. Nevertheless, I think it would be most helpful to the subcommittee if you would focus your comments on specific proposals for amending S. 484. We welcome your comments, but we need your advice.

Let me close by restating my fundamental goal for S. 484: it is to improve the rules which run the Central Valley Project in order to deliver fewer problems and more benefits to California and the Nation. The problems are real. Inefficient rules and unaddressed environmental damage are strangling your water system. I want to get the Federal bureaucracy out of the way and put the environmental problem behind the CVP so that it can meet the needs of all California's water users.

S. 484 offers this State the chance to improve its water system significantly. I know we have some hard negotiations ahead of us. But I am hopeful that, with good will and understanding, and by keeping in mind that there is far more on which we agree than disagree we will be able to fashion a bill that will be in the interests of everyone in this room and in California.

As a matter of housekeeping and schedule, since we have 31 witnesses and we have to be out of this room by 1 p.m., because the Ways and Means Committee is supposed to be in here and I am grateful that they have allowed us to use this room today and I think you are all probably more comfortable than you would have been than in the other room, we will have to limit all witnesses to a maximum of 5 minutes. I will have to enforce that rigorously.

And in the spirit of the water bank, if you want to give some of your time back and not use the whole 5 minutes, that would be appreciated, as well.

Senator Burns, who is the ranking member on the subcommittee and Senator Seymour, who is, of course, the Senator from California, one of them, will now make whatever statements they have. Then we will begin with the witnesses.

STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Senator BURNS. Thank you, Senator Bradley. I want to welcome everyone here today and I appreciate the interest that you have taken in this issue because the tug of war continues for water. It is the lifeblood of the West.

I guess there has been more people killed and shot over water than over gold or any other infatuation that man carries with him. And that continues also. So when you start talking about that resource, why we know how ticklish it gets.

The only reason I am here today, and my statement will be very short, I am from Montana and I do not worry too much about it because everybody is downstream from me.

[Laughter.]

Senator BURNS. And we are working on ways that we can work on our water issues also, but we know the importance of it, and what it does to not only our economic base, also to our environmental base. And we are very touchy about our water quality in that State.

The only reason I am here is that I want to make up my own mind about the thrust of the solution. Is it fair, will it work, this piece of legislation, how much will it cost, the mandates that are made by this legislation, and who pays the bill. It goes without saying that nobody, to this point, has given anybody on the subcommittee or the full committee the real cost of this particular piece of legislation.

So I thank you, and I appreciate Senator Bradley's interest and his time and his commitment to this issue because where he comes from in New Jersey they do not have problems like we have in the West. And to him, in trying to understand these issues, I appreciate the time and effort that he has put in on this piece of legislation.

So I look forward to working with him and I appreciate his work. So, thank you, Senator, for this opportunity.

Senator BRADLEY. Thank you very much, Senator Burns.

Senator Seymour, let me thank you, for your help and your constant attention to this issue. I know you care deeply about it.

STATEMENT OF HON. JOHN SEYMOUR, U.S. SENATOR FROM CALIFORNIA

Senator SEYMOUR. Thank you very much, Mr. Chairman, and Senator Burns. Welcome to California.

I would like to thank you, Mr. Chairman, as Chair of this subcommittee, for holding this hearing, and particularly here in Sacramento, so that we may receive testimony from those who will be directly affected by S. 484, the bill we again consider today.

Let me say, Mr. Chairman, that I applaud your efforts, your concern. I know you are sincere in wanting to ensure that there is appropriate protection for fish and wildlife as well as other water users.

I also want to commend you for the open process through which you brought this bill. You have cited most appropriately the number of witnesses and the amount of testimony that we have received and I, for one, want to thank you for being so open. I want to applaud you for bending over backwards—and for somebody of your stature that is a long bend—in trying to ensure that we hear from every segment of the citizenry of California before you go to mark up this bill.

Mr. Chairman, for the record, my position on this bill has been clear from the outset. I do not oppose what I take to be sincere efforts by you, Mr. Chairman, to address the very real fish and wildlife problems in the Central Valley. And I do not oppose the intent of bringing the CVP more in step with State water law and State water policy.

I do, however, oppose the means with which this bill attempts to accomplish all of this. I believe that this bill goes far beyond trying to achieve these objectives, and, in fact, this bill would actually impede the achievement of these important objectives. If enacted this bill will result in devastating consequences totally unacceptable to California.

Many of the provisions in this bill reach out to very specific constituencies, promising them much. For one, there is firm water supplies for wildlife refuges; for another, restoration of fisheries; for another, up to 100,000 acre-feet of water for sale on the open market; and yet for others, mandatory cutbacks forced upon agriculture and the freeing up of water for other uses. Still others see the advent of a brave new world of western water policies.

The fact that many of these promises such as those for the fisheries and refuges, actually run counter to one another is ignored. The promise is nonetheless extended and unfortunately has not been questioned, but rather naively accepted, in my opinion. Promises are illusory. While the intent may be genuine, it is these promises which have often brought certain groups with diverse and often conflicting interests together in support of the bill. But promises do not assure results. It is results that we all seek.

I would challenge those who will testify today to seriously ask of themselves, does this bill serve the best interest of our State. Experts submitted testimony stating that this measure will simply not work, whether for lack of physical facilities now in the system, or for lack of water.

Experts testified in Los Angeles and again in Washington that this bill preempts States' rights, that this bill would cause extreme economic dislocation to a region already distressed by drought and freeze. They testified that this bill would force a major reallocation of water from some of the world's most productive farmland without considering the social and economic impact. They also testified that this bill would create a dangerous precedent for other western water projects, and finally that it would promote divisiveness and undermines ongoing consensus-building efforts among the very groups that must work together to find an acceptable and long-lasting solution to California's water problems.

At the last hearing you, Mr. Chairman, announced that you would consider providing economic compensation for those who would be displaced by any provisions of this bill, thereby acknowledging that jobs could be lost, that yet more people could be out of work. Where is the wisdom in Federal legislation which accomplishes this? In it's quest to resolve the problems of fish and wildlife, I believe, Mr. Chairman, you have overlooked the people of the Central Valley. Who will look after them?

For those of you unfamiliar with Washington's ways, many of the promises in this bill are subject to the Senate Appropriations Committee. They will be the ones to determine whether or not the promises will be funded. Unlike the legislative process in California where appropriations are mandated for authorized actions, in Washington authorizations for things such as economic assistance, in this case for unemployed farm workers, must go through the Appropriations Committee. Washington, like California, is also in the throes of a budget crisis.

I am reminded of the well-meaning attempts in the Clean Air bill to ensure that economic assistance would be provided, but yet the mighty chairman of the Senate Appropriations Committee and President Pro Tempore Senator Byrd was unable to deliver that in his own committee or with the concurrence of the full Senate when the reality came and the dollars hit the table.

So, should this bill pass, the groups here today in support of it will wait and the promises that it provides I do not believe will arrive. The Appropriation Committee without funds will not come through.

In addition to this, to the very real human and economic cost of this legislation, I believe there is also an environmental cost. Ending diversions from the Trinity River for example, which is the practical effect of this bill, will have significant impacts on the anadromous fisheries of the Sacramento, Bay and Delta water quality areas, threatened species in the Delta, and wetlands and wildlife habitat in the Center Valley. Citizen suits will multiply and endless litigation will occur. That will not assist at all in environmental enhancements.

I am pleased to learn that an alternative proposal has recently emerged, a proposal from the CVP contractors which would address the fish and wildlife problems directly. This proposal builds upon ongoing efforts to achieve consensus. I have faith in Californians and I know that the best solutions are locally derived. I look forward to working with those CVP contractors and other groups to find solutions to remedy our pressing problems without resulting in the devastating consequences and in my opinion, shortsightedness, of S. 484.

We need to build on the ongoing State efforts in the San Joaquin with Federal assistance to the State. We do not need Federal dictates backed by Federal extortion on contracts and transfers. We need to respect the political process and the will of the people of California through its Governor and Legislature, the State Water Board and others.

So I urge all of those here today, if you support this bill, ask yourself is it best for California, or is there a better way to restore our precious fish and wildlife resources.

Welcome, everyone, to Sacramento and look forward to your testimony. Thank you, Mr. Chairman.

Senator **BRADLEY**. Thank you very much, Senator Seymour, for your opening statement. And now let us move right to the witnesses. The first witness is the Senior Senator from California, Senator Alan Cranston. Senator Cranston, welcome to the subcommittee. It is a pleasure to have you here. I know that this is an issue that you have cared about for a long time and we welcome your testimony.

STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM CALIFORNIA

Senator **Cranston**. Thank you very much, Mr. Chairman. It is a great pleasure, Bill and Conrad, to welcome you both to the greatest State, California, and it is a pleasure to be back before the committee—Subcommittee on Water and Power, to provide additional testimony in support of the Central Valley Project Improvement Act.

John, it is a pleasure to join with you in this hearing on an issue that is vitally important to our State, the State we represent, and I am delighted you won a seat on this committee, because it is a committee that is so significant to the interests of our State.

This legislation is needed to restore fish and wildlife affected by the Central Valley Project and I am very pleased to be working together with the chairman and each of you on this matter.

The Central Valley Project is the largest western water project, providing water to about 3 million acres, nearly one-third of the land served by the Bureau of Reclamation.

Over the years the Central Valley Project has significantly benefited the development of California providing water supply, hydroelectric power, flood control, recreation and billions of dollars of economic activity annually.

However, the Central Valley Project has also caused serious environmental damage to fish and wildlife. The Bradley bill addresses a more basic issue confronting western reclamation. When the Central Valley Project was first conceived in the early 1930's the population of California was 6 million people. Today there are almost 30 million Californians. This staggering quintupling of our population is reflected in housing, highways, automobiles, sewage systems, and the myriad energy and resource consuming devices our people depend on.

And all of this has brought pollution and other environmental pressures on our soil, our water, our air, all eroding the quality of our life sustaining ecosystems.

I trust my 5 minutes are not already up. I think there is something wrong with that red light.

Senator **Bradley**. There is one exception to the 5-minute rule, and that is a U.S. Senator.

[Laughter.]

Senator **Cranston**. Thank you, but I will not exceed the 5 minutes by any significant degree.

If we are to continue the kind of substantial diversions of natural water systems which the Central Valley Project represents, we must take steps to mitigate these environmental disruptions. Gone are the good old days when the only important consideration was if water on land meant food on the Nation's plates. Gone are the days when environmentalists could be dismissed as irrelevant bird watchers.

The struggle to protect our environment has become a struggle to ensure continuation of our way of life. Thus the kinds of problems S. 484 deals with must be addressed if we are to continue water reclamation in the Western States.

I want to respond briefly to a number of concerns which have been raised about S. 484 as well as to several comments that you made, Mr. Chairman, about Federal policies and practices at the subcommittee hearing in Washington, D.C. earlier this month.

One of the major criticisms of the bill concerns States' rights. I disagree with critics who state that S. 484 represents inappropriate Federal interventions in State water matters. The Central Valley Project is, after all, a Federal project. Moreover, I share your view, Mr. Chairman, that S. 484 can help reduce Federal interference in California's water matters, not increase it.

As you pointed out, California law permits voluntary water transfers, in most cases subject to approval, by the State Water Resources Control Broad. California law permits water banking without losing the right to that water. California law recognizes water for fish and wildlife as a beneficial use.

You ask whether it is an unwarranted intrusion in the State affairs to propose that State laws rather than Federal rules govern transferability of CVP water. You ask if it is an unwarranted intrusion to suggest that CVP be operated for purposes recognized as beneficial under California law. You ask also is it an intrusion to suggest that the Central Valley Project be held to the same standards of environmental accountability as a State water project.

Obviously none of that involves an intrusion. You also asked whether it is unwarranted Federal intrusion in the State affairs to suggest that the Central Valley Project should in time be turned over to the State of California. Well, hardly. I certainly think that a study of such a transfer should be undertaken as proposed in the bill.

The second major criticism is centered on water reallocation. I certainly understand the desire of current CVP contractors to retain 100 percent of their existing Federal water supplies. I also understand their concerns about 1-year contract renewals and the impact on growers' ability to obtain financing for farm operations, and on the viability of agricultural communities.

However, I am convinced that we need to dedicate some of our scarce water supplies for environmental purposes. Your bill wisely gives CVP contractors an incentive to reduce their water use by offering longer-term contracts in exchange for relinquishing a portion of their present contract amount. The water conserved would then be available for fish and wildlife and perhaps other uses, as well.

I recognize that many growers and water districts have already undertaken water conservation measures. Some very, very effectively. But I firmly believe that there are additional opportunities for conservation in agricultural water use.

It is generally accepted that the higher the organic content in the soil the more moisture is retained, consequently the less water is used. California farmers who are using organic farming methods have dramatically decreased their on-farm water use by using drip irrigation and heavy composting.

We need to be encouraging water conservation which S. 484 does in a number of ways so this water can be used for environmental and other needs.

As you have already indicated again, Mr. Chairman, there may be other means of increasing water supplies thereby reducing the need for long-term reallocation. I hope the witnesses today will propose other options for you and for us to consider.

Another complaint has been that the Central Valley Project is not the only cause of adverse impacts on fish and wildlife in the Central Valley. I recognize, of course, that the CVP is only one of the factors which have contributed to this environmental degradation. While S. 484 is intended to address those problems attributable to the Central Valley Project, I favor amending the bill to ensure that other Federal actions which affect fish and wildlife will also be held accountable.

I am committed to achieving the goals of this legislation in a fair and equitable way. I know there are many differences. I trust you and we can work them out. I look forward to working with you, Mr. Chairman, with Senator Seymour, and the other members of this committee to this end. I hope we will be able to move forward with S. 484 very expeditiously.

I thank you for the leadership bill that you, a Senator from far away New Jersey, are giving us on this issue that directly impacts on California. But I think we should recognize also that this measure has ramifications that will affect the entire West and the whole Nation. Thank you very, very much.

[The prepared statement of Senator Cranston follows:]

PREPARED STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM CALIFORNIA

Mr. Chairman, it's a pleasure to be back before the Subcommittee on Water and Power to provide additional testimony in support of S. 484, the Central Valley Project Improvement Act.

As you know, this legislation is vitally important to restore fish and wildlife affected by the Central Valley Project—and I'm very pleased to be working together with you on this matter.

As you know, the Central Valley Project is the largest western water project, providing water to about 3 million acres, nearly one-third of the lands served by the Bureau of Reclamation. Over the years, the CVP has significantly benefited the development of California, providing water supplies, hyrdoelectric power, flood control, recreation, and billions of dollars of economic activity annually.

However, the CVP has also caused serious environmental damage to fish and wildlife. In fostering agricultural production, the project has contributed to the reduction of waterfowl habitat in the Central Valley. Riparian wetlands which provide critical habitat for a variety of species have declined significantly, to less than 5 percent of the original acreage. Water releases from dams are often insufficient to meet minimum fishery needs. And CVP pumps are continuing to contribute to the decline of striped bass, steelhead, and salmon populations.

But beyond these immediate problems, the Bradley bill addresses a more basic issue confronting western reclamation. When the CVP was first conceived in the early 1930's, the population of California was 6 million. Today there are almost 30 million Californians. This staggering, quintupling of our population is reflected in housing, highways, automobiles, sewage systems, and the myriad energy and resource consuming devices our people depend on. And all of this has brought pollution and other environmental pressures on our soil, our water, our air—all eroding the quality of our life sustaining ecosystem.

If we are to continue the kind of substantial diversions of natural water systems which the CVP represents, we must take steps to mitigate these environmental disruptions. Gone are the good old days when the only important consideration was that water on land meant food on the nation's plates. Gone are the days when environmentalists could be dismissed as irrelevant bird watchers.

The struggle to protect our environment has become a struggle to ensure continuation of our way of life. Thus, the kinds of problems S. 484 deals with must be addressed if we are to continue water reclamation in the western states.

Today I'd like to take the opportunity to respond to a number of concerns which have been raised about S. 484 as well as to several comments you made, Mr. Chairman, about federal policies and practices at the Subcommittee hearing in Washington, D.C. earlier this month.

As you noted, one of the major criticisms of the bill concerns states rights. I disagree with critics that S. 484 represents inappropriate federal intervention in state water matters. The Central Valley Project is after all a federal project. Moreover, I share your view, Mr. Chairman, that S. 484 can help reduce federal interference in California's water matters, not increase it.

As you pointed out, California law permits voluntary water transfers, in most cases subject to approval by State Water Resources Control Board. California law permits water banking without losing the right to that water. California law recognizes water for fish and wildlife as a beneficial use.

You asked whether it is unwarranted intrusion into state affairs to propose that state laws rather than federal rules govern transferability of CVP water; to suggest that the CVP be operated for purposes recognized as beneficial under California law; or to suggest that the CVP be held to the same standards of environmental accountability as the State Water Project. I don't think so.

You also asked whether it is unwarranted federal intrusion into state affairs to suggest that the CVP should in time be turned over to the State of California. I certainly think that a study of such a transfer should be undertaken, as proposed in S. 484.

A second major criticism of S. 484 has centered on water reallocations. I certainly understand the desire of current CVP contractors to retain 100 percent of their existing federal water supplies. I also understand their concerns about one-year contract renewals—and impacts on growers ability to obtain financing for farm operations and the viability of agricultural communities.

At the same time, I am convinced that we need to dedicate some of our scarce water supplies for environmental purposes.

S. 484, as you know, gives CVP contractors an incentive to reduce their water use by offering longer term contracts in exchange for relinquishing a portion of their present contract amount. The water conserved would then be available for fish and wildlife, and perhaps other uses.

I recognize that many growers and water districts have already undertaken water conservation measures. But I firmly believe that there are additional opportunities for conservation in agricultural water use. For example, it is generally accepted that the higher the organic content in the soil, the more moisture is retained, and consequently the less water is used.

I'm told that California farmers who are using organic farming methods have dramatically decreased their on-farm water use by using drip irrigation and heavy composting. We need to be encouraging water conservation, which S. 484 does in a number of ways, so this water can be used for environmental and other needs.

However, as you have already indicated, Mr. Chairman, there may be other means of increasing water supplies, thereby reducing the need for long-term reallocations. I hope that witnesses today will propose other options for us to consider seriously.

Another complaint of S. 484 has been that the CVP is not the only cause of adverse impacts on fish and wildlife in the Central Valley. I recognize that the CVP is only one of the factors which have contributed to this environmental degradation. While S. 484 is intended to address those problems attributable to the CVP, I favor amending the bill to ensure that other federal actions which affect fish and wildlife also be held accountable. This Committee will be holding hearings in the near future on legislation dealing with the Rock Creek decision. However, I'd like to suggest the Committee amend S. 484 to restore state authority to impose environmental conditions on hydroelectric projects located in California licensed by the Federal Energy Regulatory Commission.

Finally, I'm also aware of concerns about potential third-party impacts of S. 484. We have heard that if CVP contractors are permitted to sell water to others, there will be wholesale water transfers out of certain areas, causing economic dislocation. While I think this unlikely, given the limitations of facilities to convey water in years of normal water supply, I appreciate the concern and urge the Committee to give careful consideration to this issue and any proposed solutions.

Mr. Chairman, I'm committed to achieving the goals of this legislation in a fair and equitable fashion. I know there are many differences, but I trust we can work them out. I look forward to working with you and Senator Seymour and the other members of this Committee to this end. I hope we will be able to move forward with S. 484 expeditiously.

Senator BRADLEY. Thank you very much, Senator Cranston, for your very strong testimony. I think you raised a number of very important points. I am pleased that you have commented on the aspects of the bill that you think are strong, and made suggestions on those that you think can be improved. That really is what I hope will happen throughout the hearing process today.

Senator Burns.

Senator BURNS. I have no questions.

Senator CRANSTON. Thank you all very, very much.

Senator BRADLEY. Thank you very much, and let me tell you once again how much I appreciate your interest, support, and guidance.

Senator CRANSTON. Thank you, well, I appreciate yours very, very much, thanks.

Senator BRADLEY. Our next witness will be the Hon. Wally Herger, U.S. House of Representatives. Well, we are down to 30 witnesses.

[Laughter.]

Senator BRADLEY. Oh, yes, ma'am.

STATEMENT OF HON. WALLY HERGER, U.S. REPRESENTATIVE FROM CALIFORNIA, AS PRESENTED BY FRAN PEACE

Ms. PEACE. Good morning, Mr. Chairman, my name is Fran Peace, I am District Director to the Hon. Wally Herger, Member of Second District.

Mr. Chairman, I wish to commend you and the subcommittee for holding this hearing here in the heart of the Sacramento Valley, the area which would be most affected should S. 484 be adopted. As you are all well aware, we in California are facing some very severe problems. We are in the midst of our fifth year of an unprecedented drought and are faced with a challenge of restoring anadromous fish populations in the Sacramento Valley.

In the face of these two daunting problems everyone is having to cope with reductions in water supplies. Among CVP customers, most of our agricultural users have had to shoulder the lion's share of this burden through 75-percent cutbacks in their contract supplies.

These reductions have exacerbated the already sluggish economic conditions of rural northern California and strained the ability of local and State governments to provide essential services. At present the counties of my Northern California District are suffering through crippling rates of unemployment. In March 1991 unemployment rates in each of the counties in my District along the Sacramento River continued to rise. For example, Yuba County's March unemployment rate stood at 18.7 percent; Glenn County was 20.2 percent; Tehama County was 23.7; and Colusa County stood at 25.6. This is compared to a national unemployment rate of 6.8 in March.

These figures should serve as a reminder to us that attempts to solve one problem can often result in a myriad of new problems.

We must also remember that altering major projects such as the CVP will dramatically impact the lives of real people.

Clearly, restoring the fishery resources of the Sacramento Valley is an issue of great importance not only to you and me, but to everyone who was connected with the CVP. The debate is not over whether or when we should restore the Sacramento Valley's fishery resources, but it is over how we can best accomplish this objective. I believe that a consensus approach which ensures long-term community compliance and viability is the only rational course to pursue. Attempts to formulate solutions to the fishery restoration problems through a consensus approach have been remarkably successful.

This is the approach behind the Upper Sacramento River Fishery Resources Restoration Act, H.R. 1728 and S. 728 which is legislation introduced by myself in the House and by your colleague, Senator John Seymour, in the Senate. This legislation implements the findings included in the upper Sacramento River fisheries and riparian habitat management plan which was drafted by the Advisory Council established in 1986 by California Senate bill SB 1086. This management plan was the culmination of 4 years of effort to formulate a solution which would not only work in restoring fishery resources, but also maintain the health and viability of local communities.

The plan of action set out in H.R. 1728 and S. 728 is the product of a consensus reached by groups historically at odds, environmental, recreational, agricultural, landowner and water groups, as well as Federal, State, and local agencies. Indeed, it showed that agriculture, the environmental community, the Government and the sportsmen can work together to save this resource. In fact, similar efforts are underway for the San Joaquin River system and groups continue to work on formulating consensus agreements on refuge water supplies.

While my legislation may only address part of the Sacramento Valley's fishery resources problems, I believe that all involved parties are willing to continue working to develop a consensus solution to the problems facing the Sacramento Valley. I encourage the subcommittee to actively seek out and work to incorporate the views and concerns of the involved parties and work toward a consensus solution.

Unfortunately, S. 484, as presently formulated, is seen by the communities I represent as an extreme approach that only takes into account its effect on fish. We have an obligation to ensure the preservation of Sacramento Valley fish stocks, however, we also have an obligation to do so without bankrupting local communities and disrupting people's livelihoods. We can solve these problems by working together.

As currently written, S. 484 will definitely endanger the livelihoods of everyone living in northern California, while possibly restoring fish populations. For example, section 4 bars agriculture from securing long-term water contracts until all the act's goals have been accomplished. This provision would force agriculture producers to survive on short-term water contracts, making it nearly impossible for them to obtain essential agricultural financing. Not only will this impact our farmers and related business, but it may also increase the instances of bank failures in our rural communities.

Should S. 484 be implemented the reduction in farming activity which is the predominate employer in these communities, would push the already dangerously high unemployment rates significantly higher and increase the demand on local, State, and Federal Governments for services.

Senator **BRADLEY**. Your 5 minutes is up.

Ms. **PEACE**. I hope that the subcommittee will follow the example of the SB 1086 council.

Gentlemen, thank you very much for your attention.

[The prepared statement of Mr. Herger follows:]

PREPARED STATEMENT OF HON. WALLY HERGER, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. Chairman, I want to commend you and the subcommittee for holding this hearing here in the heart of the Sacramento Valley, the area which will be most affected, should S. 484 be adopted.

As you are all well aware, we in California are facing some very severe problems. We are in the midst of our fifth year of an unprecedented drought and are faced with the challenge of saving and restoring anadromous fish populations in the Sacramento Valley.

In the face of these two daunting problems, everyone is having to cope with reductions in water supplies. Long CVP customers, most of our agricultural users have had to shoulder the lion's share of this burden through 75% cutbacks in their contract supplies.

These reductions have exacerbated the already sluggish economic conditions of rural northern California and strained the ability of local and state governments to provide essential services. At present, the counties of my northern California district are suffering through crippling rates of unemployment. In March 1991, unemployment rates in each of the counties in my district along the Sacramento River continued to rise. For example, Yuba County's March unemployment rate stood at 18.7%, Glenn County was 20.2%, Tehama County was 23.7%, and Colusa County stood at 25.6%, this is compared to a national unemployment rate of 6.8% in March.

These figures should serve as a reminder to us that attempts to solve one problem can often result in a myriad of new problems. We must also remember that altering major projects, suck as the CVP, will dramatically impact the lives of real people.

Clearly, restoring the fishery resources of the Sacramento Valley is an issue of great importance not only to you and me, but to everyone who is connected with the CVP. The debate is not over whether or when we should restore the Sacramento Valley's fishery resources, but it is over how we can best accomplish this objective. I believe that a consensus approach which ensures long-term community compliance and viability is the only rational course to pursue. Attempts to formulate solutions to the fishery restoration problems through a consensus approach have been remarkably successful.

This is the approach behind the Upper Sacramento River Fishery Resources Restoration Act, H.R. 1728 and S. 728, which is legislation introduced by myself in the House, and by your colleague, Senator John Seymour, in the Senate. This legislation implements the findings included in the Upper Sacramento River Fisheries and Riparian Habitat Management Plan, which was drafted by the advisory council established in 1986 by California Senate bill (SB) 1086. This management plan was the culmination of 4 years of effort to formulate a solution which would not only work in restoring fishery resources, but also maintain the health and viability of local communities.

The plan of action set out in H.R. 1728 and S. 728 is the product of a consensus reached by groups historically at odds—environmental, recreational, agricultural, landowner and water groups, as well as federal, state, and local agencies. Indeed, it showed that agriculture, the environmental community, the government, and the sportsmen can work together to save this resource, in fact, similar efforts are underway for the San Joaquin River system, and groups continue to work on formulating consensus agreements on refuge water supplies.

While my legislation may only address part of the Sacramento Valley's fishery resources problems, I believe that all the involved parties are willing to continue working to develop a consensus solution to the problems facing the Sacramento Valley. I encourage the subcommittee to actively seek out and work to incorporate the views and concerns of the involved parties, and work toward a consensus solution.

Unfortunately, S. 484, as presently formulated, is seen by the communities I represent as an extreme approach that only takes into account its effect on fish. We have an obligation to ensure the preservation of Sacramento Valley fish stocks; however, we also have an obligation to do so without bankrupting local communities and disrupting people's livelihoods. We can solve these problems by working together.

As currently written, S. 484, will definitely endanger the livelihoods of everyone living in northern California, while possibly restoring fish populations. For example, section 4 bars agriculture from securing long-term water contracts until all of the Act's goals have seen accomplished. This provision would force agricultural producers to survive on short-term water contracts, making it nearly impossible for them to obtain essential agricultural financing. Not only will this impact our farmers and related businesses, but it may also increase the instances of bank failures in our rural communities.

Should S. 484 be implemented, the reduction in farming activity, which is the predominant employer in these communities, would push the already dangerously high unemployment rates significantly higher and increase the demand on local, state, and federal governments for services.

Likewise, the severe limit on water contracts in this legislation will have several devastating effects on local communities, as well as agriculture. Uncertain water supplies would decimate local economies by reducing the communities' tax bases, and by pulling down all of the Sacramento Valley businesses which are dependent on the agricultural economy.

While I applaud the attempt of S. 484 to restore the fishery resources of the Sacramento Valley, I believe this legislation, in its present form, would create great instability in our local economies. It promises questionable results at a very great cost, not only in terms of dollars, but in the devastating effect it will have on local communities.

I hope that the subcommittee will follow the example of the SB 1086 Council, which has shown us that fish and agriculture are not mutually exclusive pursuits. As I stated previously, I believe that all the involved parties continue to actively pursue a consensus solution to the problems facing the Sacramento Valley, just as they have in dealing with the problems of the Sacramento River. I hope that this is the course which will be pursued by this subcommittee, and I look forward to working with you and all the involved parties to formulate a solution to this problem.

Senator **BRADLEY**. Thank you very much. Please tell Congressman Herger we appreciate his contribution to the hearing today.

Ms. **PEACE**. Very good, thank you very much, Senator.

Senator **BRADLEY**. Thank you very much.

Our next witnesses are a panel consisting of the Hon. Dave Roberti, the Hon. Ken Maddy, the Hon. Phil Isenberg.

STATEMENT OF HON. KEN MADDY, CALIFORNIA STATE SENATOR

Senator **MADDY**. Thank you, Mr. Chairman, Members of the committee. I am Senator Ken Maddy, the Republican Leader in the Senate and the Representative of the 14th senatorial district.

The 14th district, for all of you who are new to California, represents all or part of the central part of the State of California. I represent a large part of the San Joaquin Valley, as well as areas along the scenic coast of Monterey and San Luis Obispo, and a good part of Yosemite Valley. It is a District that is large, but agriculture is the principal part of our economy.

I appreciate very much your willingness to come to Sacramento to take testimony on this controversial piece of Federal legislation. I am encouraged by the chairman's remarks in respect to the fact that the bill is not in its final form, that you are going to consider amendments and that you are going to consider the testimony of the people today.

I want to urge you to please weigh carefully the evidence and comments to be presented today by the California water users and the agricultural producers of our State.

The lifeblood of the economy of my District is agriculture. As large as the District is, in fact geographically I think, Senator, that my District is larger than your State. And to Senator Burns, I am downstream. Our District is downstream. Not only that, I represent the economy of agriculture which takes about, uses about 80 percent of the water in this State, and we are only about 15 percent of the population. It does not take a great deal of imagination to know that when somebody begins to push on water supplies that we are the ones who are the pushees.

I want to take a moment or two and discuss a couple of concerns. Our principal concern is that this bill imposes terms and conditions on water sales contracts that have never been seen before. Contracts for water service are limited to 1-year terms unless all of several nearly impossible conditions are met. As we understand the bill, firm water supplies must be established for the restoration of Central Valley wildlife refuges. While there may be some scientific dispute over how much water is required for this purpose, there is no doubt this will cause less water to be available for agriculture and municipal uses.

Having gasped our way through the fifth year of a drought will Californians be expected to give up critical supplies in the sixth year of a drought in order to fully supply the water requirements of the refuges restored under this bill? I think that is requiring too much of our citizenry and too much of agriculture.

Second, the act requires the full mitigation of damages to fish allegedly caused by the CVP. Aside from the problem of ascertaining firm evidence of damage by the Central Valley Project, a restoration fund is created to collect $30 million annually in surcharges from CVP water and power sales. As a negotiator on the budget, and I am going to leave shortly to go back to those negotiations, I have seen and heard enough about fees, assessments and surcharges being proposed in the last few days to help balance our State budget, which we have a small $15 billion shortfall, to last me a lifetime.

I come to one conclusion: a surcharge is a tax and it is nothing else. It matters not that the $30 million will be spent on this or that worthy program. The $30 million is a dead weight loss to the State's economy and represents lost capital formation and job creation. Agriculture in California, I do not think, can take it economically.

Third, the act requires Federal EPA approval of the State Water Resources Control Board's future decision establishing Bay, Delta water quality standards. This type of Federal control over the State water quality policy, which is now properly being developed in light of existing Federal environmental laws, I believe is unacceptable.

It is one thing for the Federal Government to manage the CVP under the terms of the coordinating and operating agreement, it is quite another thing to extend de facto managerial control over the

State project, which is supposed to be, after all, an equal partner in the management of the water resources in California.

Finally, the near impossibility of meeting these conditions means that 1-year water service contracts will become the norm rather than the exception. The financial markets for farm production loans and water facilities construction funds will note this element of uncertainty mainly due to severely narrow payback periods and the cost of funds will increase accordingly. This is another burden created by this bill that our growers should not have to bear.

One final thought on S. 484. The bill essentially elevates water use for fish and wildlife purposes to equal standing with all other existing CVP purposes. This should not be allowed to occur. I believe that it opens the door for extended and costly litigation in every operating rule and procedure authorized in the bill. Not only that, the bill includes provisions allowing citizens to bring suit to enforce nondiscretionary provisions of the act. There is no purpose served in making water policy in California any more fractious, litigious or difficult.

In short, a great deal needs to be done. I am delighted that Senator Seymour is here working on the committee and I share many of his views. I am even more pleased that the chairman seems willing to discuss these issues with the representatives of agriculture and our people in our State. And I welcome you to Sacramento. This is not the Great Valley, we call the Great Valley San Joaquin Valley, but we are delighted that you are here. And I apologize for leaving early but we have to get back. Thank you very much.

Senator BRADLEY. Thank you very much, Senator Maddy, for your testimony.

Senator SEYMOUR. Mr. Chairman, if I might, I think this would be the appropriate time, not only to say thank you to Senator Maddy, but ask that letters from the County of Fresno and the resolution of the city council of Fresno be entered into the record. They in essence support many of the things, the statements made by Senator Maddy.

Senator BRADLEY. They will be included in the record at this time.

[The information referred to follows:]

RESOLUTION No. 91-223

RESOLUTION OF THE COUNCIL OF THE CITY OF FRESNO, CALIFORNIA, CONCERNING THE IMPACT OF THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT, S. 484

WHEREAS, water is the base of the economy of Fresno and the Central Valley; and

WHEREAS, the Central Valley Project (CVP) is the major source of that water; and

WHEREAS, the annual average over draft of the valley's underground water supply is in excess of 1.2 million acre feet; and

WHEREAS, CVP water is a major source of recharge of the valley's underground water supply; and

WHEREAS, farmers and other business must have long-term water contracts in order to secure financing and conduct business; and

WHEREAS, withholding twenty percent of the CVP water from CVP contractors would exacerbate the overdraft resulting in a massive negative impact; and

WHEREAS, the central valley's growth rate, which is now the fastest in the nation, is increasing demand on the Central Valley's limited water resources; and

WHEREAS, fish and wildlife are important and valuable economic and environmental resources of the Central Valley; and

WHEREAS, the Central Valley Project Improvement Act, (ACT), allocates water to those with the greatest wealth without respect to need; and

WHEREAS, the Act fails to consider complex and intricate hydraulic and legal relationships between water systems in the state; and

WHEREAS, the Act places an onerous burden on CVP contractors for mitigating impacts on fish and wildlife resources may of which have no relationship to the CVP; and

WHEREAS, the Act would create a costly agency over which citizens have little control; and

WHEREAS, the Act would disrupt the on going and productive negotiations between Environmental, Urban and Agricultural interests; and

WHEREAS, the Act invites needless, costly and unproductive litigation; and

WHEREAS, the Act is not in the best interest of the City of Fresno, it's residents, nor the residents of the Central Valley and the state:

NOW THEREFORE, IT IS RESOLVED, by the Council of the City of Fresno, California that it is opposed to S. 484, the Central Valley Project Improvement Act.

Board of Supervisors,
Fresno County, CA, May 24, 1991.

Hon. Bill Bradley,
Chairman, Subcommittee on Water and Power, 306 Dirksen Building, Washington, DC.

Dear Senator Bradley: I regret that I will not be able to attend the hearing next week on S. 484 in Sacramento. As Chairman of the Fresno County Board of Supervisors, I am compelled to express concerns and hopefully convey the detrimental effect S. 484 would have on the people of Fresno County.

Fresno County, the number one agricultural producing County in the United States, generated over 2.9 billion dollars last year. A significant amount of this agricultural production was due to the water made available through the Central Valley Project. Any legislation that would make changes in the management or availability of water for Fresno County farming enterprises would certainly create havoc on the entire economy of Fresno County and the Central Valley.

I would draw your attention to the pain and human misery that have been placed on the people of Fresno County because of the drought and freeze of this last winter. These are not man made disasters and we must sustain those suffering in their time of need. The high unemployment rate that has caused economical hardship on many families would most assuredly increase with the implementation of S. 484 thus adding to the suffering of those already hit hard.

Efforts to enhance fish and wildlife is certainly commendable but we must be cognizant that the solutions we create for environmental challenges must never add to the misery of our fellow man.

I would applaud additional development of the water supply in California with all of these aforementioned concerns in mind. Redirection of the present water supply in any manner that would be detrimental to the economy and well being of citizens of Fresno County is aggressively opposed.

Sincerely,

Deran Koligian, *Chairman,*
Fresno County Board of Supervisors.

The Secretary of Veterans Affairs,
Washington, DC, May 7, 1991.

Hon. Bill Bradley,
U.S. Senate, Washington, DC.

Dear Senator Bradley: It has come to my attention that the Water and Power Subcommittee of the Energy and Natural Resources Committee will be holding a hearing tomorrow on S. 484, the "Central Valley Project Improvement Act." I would like to take this opportunity to address a matter of grave concern to the Department arising from the proposed legislation and an omission from the Energy and Water Development Appropriations Act, P.L. 101-514, and to suggest a means of addressing that concern.

S. 484, as introduced, would severely restrict the ability of the Secretary of the Interior to enter into agreements for providing water from the Central Valley

Project. Such a restriction, if enacted, would threaten the completion and operation of San Joaquin Valley National Cemetery, scheduled for completion in November 1991.

The VA must secure water to meet minimal, essential operational requirements of the cemetery. The annual operating request for the cemetery is 250 acre feet of water.

In order to insure that VA and the Secretary of the Interior may enter into an agreement to secure water from the Central Valley Project, I ask that you consider an amendment to S. 484 that would permit such an agreement to go forward. The Office of General Counsel has proposed the following language:

> Sec. 4(e). Notwithstanding the requirements of this Act, the Secretary of the Interior is authorized to enter into an agreement with the Secretary of the Department of Veterans Affairs (VA) to provide sufficient water from the Central Valley Project to operate the VA cemetery being constructed at San Joaquin, California.

A related concern which might also be addressed in this legislation is a result of P.L. 101-514. By way of background, the water necessary to operate the new cemetery must be transported through aqueducts or canals owned by the California Department of Water Resources (DWR). The DWR has determined that it will grant use of the aqueduct system only to water users who are members of the Central Valley Project or who are exempt from membership through federal legislation. P.L. 101-514 contained a list of federal exemptions from membership in the Central Valley Project, but VA was not included on the list.

I therefore request that you consider including such an exemption for VA in S. 484.

With these two corrections: exempting VA from membership in the Central Valley Project, and authorizing an agreement between Interior and VA for supply of water to operate the new cemetery, the VA hopes to be able to open and operate this much-needed national cemetery.

I appreciate your consideration of the Department's concerns and your efforts to address those concerns.

Sincerely,

EDWARD J. DEERWINSKI.

STOCKTON EAST WATER DISTRICT,
Stockton, CA, May 1, 1991.

Hon. JOHN SEYMOUR,
U.S. Senate, Washington, DC.

Subject: S. 484—CVP Improvement Act

DEAR SENATOR SEYMOUR: I am writing as directed by Stockton East Water District (SEWD) Board action of 4/30/91.

The District opposes the subject bill in its present form because it places the full burden of environmental restoration on CVP water users. It makes absolutely no sense to require some users of Central Valley Water to restore the fisheries while other users of the same water are required to do nothing.

Many people are under the impression that all or most users of water from the Sierras are served by the CVP. This is simply not true. Most of the San Francisco Bay urban area uses Sierra water delivered by EBMUD, Hetch Hetchy, and the State Water Project.

SEWD, a member of the CVP, has contracted for 75,000 AFA from the Stanislaus River. Oakdale Irrigation District and South San Joaquin Irrigation District use 600,000 AFA from the Stanislaus River; but would not be required to share in the environmental restoration. Others, including Turlock and Merced Irrigation Districts, use enormous amounts of Sierra water, but are not part of the CVP.

SEWD supports the environmental restoration intended by S. 484, but believes that all users of water normally tributary to the Central Valley should share the burden of environmental restoration.

SEWD also believes that S. 484 is premature. Any effort of this nature must wait for completion of the SWRCB Bay-Delta Study, which must satisfy the requirements of the "Racanelli Decision".

Have we not yet learned that piecemeal solutions never work? Let's put all users into the equation. Please revise S. 484 to include all users, and defer action until completion of the Bay-Delta Study.

Very truly yours,

EDWARD M. STEFFANI,
General Manager.

Senator BRADLEY. Assemblyman Isenberg.

STATEMENT OF HON. PHILLIP ISENBERG, CALIFORNIA STATE ASSEMBLYMAN

Mr. ISENBERG. Mr. Chairman, Members, thank you very much. You sure stirred things up, Senator, you got all these people turned out and got everybody all excited in the State of California.

Senator BRADLEY. Before you begin, since you raised the issue of the number of people here, let me tell those who are standing in the back that there still are seats available at the balcony. If you get tired of standing the balcony is free. There are a few people up there, but not nearly as many, and you probably will be able to see better and maybe hear better.

Assemblyman Isenberg.

Mr. ISENBERG. Thank you very much. Senator, Members, let me abide by your 5-minute rule and give you three facts and an opinion.

Fact No. 1, there is a Federal deficit and it is real. You know that better than I do. But it affects the policy decisions you will inevitably make this year and for the next 20 years in the future.

No. 2, in the water area, James Watt and the Environmental Defense Fund have symbolically joined hands. The fact is over the last 10 years the challenge for water in the Western United States, particularly California, has been to establish free market principals in water, not exclusively but substantially, and that merger of ideological interests has frankly freed the debate and the historic alignments in California and caused all of us to be highly uncomfortable.

No. 3, I consider it a fact, it does not rain just because you build a dam, which has been the traditional solution to all the water problems in California, build something and it will rain.

Here is my opinion: the Federal Government controls 30 percent of the water in this State, including the Central Valley and the Imperial, Southern California water. Either we cooperatively manage the water system to meet the needs of California or inevitably there will be a gigantic explosion and people will be hurt.

Now putting aside the debate on this particular bill for a moment, I believe it is in the interests of both the United States and the State of California to try to figure out cooperatively how to merge all of the interests.

Now, ironically, of course, in water in this State, everybody is in favor of cooperating as long as their own interests are not affected. If the people who use 30 percent of the water in the State through the Federal system have their way, they would say, of course, that the other 70 percent of the users should cooperate. But of course 40 percent of the water, almost 40 percent comes from underground use in this State, almost nobody regulates that. And everybody is in favor, if they use underground water, of the rest of the water users solving their problems.

After awhile, of course, all problems of the State are solved by 2 percent of the people using 2 percent of the water and they cannot be solved.

Senator, it seems to me, I probably should not say this, whether your bill passes or not there are trends going on in western water that are irreversible, irreversible. The first trend is there is right now a slight transfer of agricultural water use to urban areas and environmental use. You cannot have a growth level of 369 percent in Fresno County over the last decade without some farmland going out of production. They do not grow crops anymore, they grow houses.

Now, you may say that that is too bad. You may say that it should not occur, but we are not talking about growth control here. That continuing transfer will go on and it is slight.

On the other hand it is clear from what Governor Wilson did during the drought emergency that voluntary cooperative transfers, water banking and water marketing are a permanent feature of California water right now and for the future. In my opinion they ought to. And that is without regard to the bill.

The point, of course, is since you represent 30 percent of the total supplies, do you play in this arena as a participant or stand back and say, no, everybody else.

But the third point is there is clear environmental damage resulting from everything we do in water and all the people say it is not very much, or it is somebody else's fault. All you have to do is look at the Federal problem of Kesterson and understand what is going on and has gone on in the State. I view Kesterson as not just a problem but an opportunity as I will mention.

Now you asked me to focus on your bill and changes and so on. And obviously I support your bill, I think it is a terrific bill, very modest, very moderate. I do not know why everybody is excited, but I think it is a terrific bill.

I suggest to you two areas, Senator, that are, I believe, worthy of your attention. The first was raised by Senator Seymour in his formal statement, I believe he was absolutely correct.

I think you ought to somehow change your bill to give social and economic protection of some sort to the area of origin of transfer. I do not think you can legitimately in this day and age expect to have a transfer of significance occur without at least some attention. Now, I do not know whether that is an environmental impact report, I do not know what the conditions and terms are, but at the very least Senator Seymour's point, it seems to me, is a rational and valid one. I think I recall reading your reflective statements after your last hearing in Los Angeles, Senator, and I believe you agree with him on that.

The second is you may find that there is a convergence of interest in a combination of other issues. The city of Los Angeles takes a lot of its water from the Owens Valley outside the State system, outside the Federal system. They are losing important decisions right and left. They are about to lose about 100,000 acre-feet of water.

The State Legislature 2 years ago in legislation, well, Senator Seymour voted for this legislation carried by myself and one of my Republican colleagues, set aside $60 million to try to solve the problem.

Would it not be rational to try to figure out whether or not you could merge the issues of Kesterson where you have up to 60,000 to 70,000 acres of selenium-tainted. poisons-tainted land that is continuing to generate a problem that the Federal Government and the Federal taxpayers have to pay for, would it not be significant to at least consider the recommendation of the Bureau of Reclamation's own task force that said all of the taxpayers ought to participate.

One of the ingredients was the retirement eventually of about 70,000 acres of land. Why would it not make sense, Senator, for you to merge your consideration, this is all part of the Central Valley, and say, okay, why do we not use the State, why do we not bring the city of Los Angeles, why do we not retire the land that ultimately the taxpayers have to pay for. Everyone agrees at one point or another you cannot continue to farm land that is heavy with selenium unless you are going to pay an arm and a leg, and that does not generate water available for environmental purposes and urban purposes and meet your transfer requirements and the other requirements of the Federal Government to clean up a problem.

I will reflect just lastly on the points that I think are essential in your bill and should not be modified. The supremacy of State law and water transport it seems to me is key, I cannot help but saying what I appear on this bill I call myself a conservative States' rights Democrat, and I am proud to support your notion of States' rights.

Number 2, I think you have to have the ingredient, whether it is in emergency or normally. Federal CVP water cannot be excluded from other considerations in the State of California. It is not owned by a separate government or a separate nation, it is part of the whole State.

And third and last, I think your insistence that Federal contract renewal has to be rationally debated and cannot simply ratify decisions made 4 years ago. It is so fundamental it should not really bear legislative repeating, but it seems to me it must.

Senator, I apologize for taking so much time; it is an honor to be here and good luck.

Senator **Bradley**. Thank you very much, Assemblyman Isenberg, for your very clear testimony. I think that your suggestions are extremely helpful and I hope that other witnesses will be as helpful in terms of specific suggestions about improvement of the legislation.

Mr. **Isenberg**. Thank you.

Senator **Bradley**. Well, since two of the witnesses on panel 1 did not show up, we are ahead of the game at this stage and I think we will just try to push ahead as consistently as we can.

Our next witness is Doug Wheeler, Secretary, California Resources Agency. Mr. Wheeler, welcome to the subcommittee. Your willingness to appear today is greatly appreciated and your testimony at previous hearings has been enormously helpful, in fact has helped guide this legislation and we look forward to your comments about further improvements or concerns or worries or whatever you might chose to share with the subcommittee today.

STATEMENT OF DOUGLAS WHEELER, SECRETARY, CALIFORNIA RESOURCES AGENCY, SACRAMENTO, CA

Mr. WHEELER. Thank you, Mr. Chairman, Senator Burns, Senator Seymour, I appreciate the opportunity to be a part of this continuing process to address what we all acknowledge as one of the critical issues confronting California today, namely the protection of its important fish and wildlife resources, to be concerned, as well, about the economic well-being of the State, so much dependent on water, as we are, and upon the environmental future of California.

As you have already observed, I did participate in the Los Angeles hearing. The Governor was represented at the hearing in Washington, and in his letter to you he has emphasized anew the importance of the Central Valley Project and the importance of its being well administered in terms of all of the needs of the State of California.

I would like very briefly to make three points if I might, Senator, this morning. First, bring you and your colleagues up to date on the status of fish and wildlife resources in the State as we speak today. Second, to discuss with you some of the urgent short-term needs for the protection of those resources and some of the efforts already underway to protect those resources. And finally to discuss with you the prospects for dealing with the longer-term issues, many of which are addressed by S. 484.

Let me begin on the status of fish and wildlife by reporting some not very good news. The drought, taken together with the effects over the years of the CVP, a dramatic increase in population of the State as has already been testified to, have combined to create what must be described as a critical situation here in the State for many important fish and wildlife species.

You probably know, for instance, that wetlands in the Central Valley have declined by nearly 95 percent from their historic coverage. As a result myriad wetlands dependent species, most notably water fowl along the Pacific Flyway, are also in serious decline.

The Chinook salmon have declined precipitously in several important respects. First the winter run of the Sacramento River has been designated as a threatened species under the Federal Endangered Species Act and endangered under California's Act. Only a few hundred fish have returned to spawn this year.

The San Joaquin spring run of salmon has been extirpated, eliminated.

In 1990 the combined run for the Merced, Stanislaus, and Tuolumne Rivers was 600 fish—down significantly from historical numbers.

Striped bass, a popular sport fish introduced to California 100 years ago have also declined dramatically. Since 1959 the California Department of Fish and Game has calculated an annual index of striped bass production. In 1965 the index reached a high point of 117.2. The comparable number in 1986 was 64.9; in 1987, 12.6; in 1988, 4.6; in 1989, 5.1—only to fall again to an all-time low in 1990 of 4.3. 1991 may be lower yet. In the 1960's there were about 3 million adult striped bass in the population, while today this figure stands at about 500,000.

The Delta smelt population has declined to a point where it is being considered for listing under the State and Federal Endangered Species Acts.

Riparian habitat of the Sacramento River has been severely degraded or eliminated. Of 800,000 acres, only 12,000—less than 2 percent—remain.

We believe given those facts, given the serious pressures of population and development in the State that we must take immediate and comprehensive action to protect the State's fish and wildlife resources. Not only is it important that we do so, we believe it is the duty of the State to protect these resources and to act aggressively in so doing.

Further, we recognize, of course, that CVP operations certainly have contributed to that situation. And at the same time represent an indispensable tool to our use in efforts to approve the situation for fish and wildlife. It is difficult, however, to separate completely the effects of the CVP from these other phenomenon which have contributed to the loss of habitat and to the loss of species, the general impacts of population growth in the Central Valley, the effects of the drought of the last 5 or 6 years. And land conversion from a natural use to more intensive use throughout the State.

And so while we have some concern about modification of the CVP operation, believe that is an important approach, we do think that other steps are necessary, as well, if we are to take a look, a comprehensive look at the need to protect these resources.

Let me just suggest to you a number of ways in which that is already occurring in the State and ways in which the interests of all of the State's stakeholders, agriculture, conservationists, water users are being represented. You have heard reference already this morning to the Upper Sacramento River management task force, an effort that began in our Legislature here, has had the leadership of distinguished Californians, including Bob Bosworth, has produced a program which we will believe severely and importantly protect the resources of the upper Sacramento River.

The Suisun Marsh Resource Conservation Agreement is another effort of this kind, a consensus-building effort including the interests of all parties.

The Central Valley Habitat Joint Venture also underway to protect the important wetlands of the Central Valley and the Pacific Flyway.

The San Joaquin River Management Advisory Council, a new effort, relatively new effort, based on the success of the Upper Sac to replicate its successes in that watershed.

The Grasslands Resource Conservation and Water Districts, a private effort to protect the wetlands of the Central Valley.

All of these efforts have been and are being undertaken in a spirit of cooperation and consensus building. We believe that they represent, as such, a real departure from divisive politics that have formerly characterized decision-making on matters pertaining to water.

For this reason Governor Wilson is deeply interested in seeing that such processes are encouraged and supported and that new ones are initiated where necessary and that their recommendations are carefully implemented.

Many of the remedial measures which are identified as the result of these programs and as a part of these projects are or will be addressing fish and wildlife concerns in the short run. And in the mid-term, as well.

In that same vein we are encouraged by the draft legislation which the Federal water contractors have circulated to you and to others around the State, because they, too, represent a needed set of immediate responses that will have a positive effect on fish and wildlife in the short term.

While in the Senate Governor Wilson introduced legislation that would address those fishery needs in the upper Sacramento that I identified a moment ago, Senator Seymour continues that interested legislation that he has introduced.

Today the Federal water contractors have presented a proposal that incorporates the recommendations of the Upper Sacramento River Advisory Committee and also include additional fish and wildlife restoration measures which we believe have been identified appropriately with the help of the Department of Fish and Game.

We applaud those efforts and we urge that the committee give careful consideration to those recommendations.

The Federal Government, of course, and the Congress play a key role in the success of these near and mid term fish and wildlife restoration and improvement measures. The Upper Sacramento River Advisory Committee issued its findings nearly 2 years ago. It is time, we believe, to move forward with the authorization of the Council's recommendations.

In addition the House has passed, but the Senate has not yet passed, legislation to provide drought relief measures recommended to it for the operation of the CVP by the Department of the Interior. Again we ask that these measures be under your leadership as passed as expeditiously as possible so that final approval might be secured for these emergency measures, as we continue to deal with a fifth year of the drought here in California.

Without that cooperation, without the mutual support of Federal and State agencies our hands here in California are unnecessarily constrained. We are, for example, set to move forward with $16 million worth of State-funded drought relief measures for fish and wildlife which were proposed in February by Governor Wilson; 63 separate measures are embodied by that $16 million program.

Concurrent Federal effort, a compatible and complementary effort, would at the very least enable our State program to proceed in its full effect. And more probably we would likely see benefits to fish and wildlife which, on the whole, involving both State and Federal efforts, would be greater than the sum of the various individual initiatives.

Let me talk last about linking the short and mid term efforts, some of which are now underway as a result of consensus here in the State, some of which are about to be undertaken as a result of a response to the drought with the longer need. And I will try to——

Senator BRADLEY. See if you can wrap it up in about a minute and a half, 2 minutes.

Mr. WHEELER. I will do it. We want very much to point to the drought's silver lining, Senator, if it has one. The realization that through this opportunity to experiment with new methods we have come upon the success of a water bank and market mechanism. We have come to the realization that there will be sustained water shortages with adverse impacts upon fish and wildlife resources, that increasing population of 800,000 a day or so, a year or so, are beginning really to take their toll, but that there are remedial actions that can be taken, some of which I have already described.

I mentioned that the water bank has been a success beyond our expectations, so too have water conservation programs. These lessons will be included in the development of long term water policy for California.

The Governor, in his inaugural address less than 6 months ago, talked about the need to anticipate a long-term policy with respect to resources, as with respect to other issues. And we will soon adopt management strategies that take into account the interests of fish and wildlife, with the economic necessity of protecting California's incredibly important agricultural industry, and also the needs of its water users.

Let me conclude, Senator, by suggesting first and foremost there is a need to address these problems urgently and immediately and constructively. I think there is no disagreement about that.

No. 2, we need to do so in a way which recognizes the importance the consensus has played and will continue to play in arriving at policy solutions here in California.

And third, that as we address long-term needs of the Central Valley, the State is prepared, the Governor is prepared to assert leadership and to work cooperatively with you.

Senator BRADLEY. Mr. Wheeler, thank you very much for your testimony. I would have only one question and that is you outlined in some detail the seriousness of the situation with the salmon, the striped bass, the other wildlife.

How much water do you think is required in order to avert what could be many of these species ending up on the endangered species list, then someone stepping in, the Federal court taking control of the CVP and enforcing a certain set-aside for water? How much water is needed?

Mr. WHEELER. Impossible to give you a precise answer to that question because we have to make certain assumptions about the extent of the drought, its duration. Let me just tell you that for planning purposes we expect to expend at the State level alone about $16 million on remedial measures to offset the effects of the drought.

We are estimating the need for about 100,000 acre-feet in areas where there are State responsibilities and are proposing that there be carryover in the water bank for that purpose of an equal amount. The CVP obviously has commensurate needs, if not greater needs, particularly with respect to the Federal fish and wildlife refuges for which it has the principal water responsibility.

Senator BRADLEY. So for the State water project you are essentially setting aside 100,000 acre-feet?

Mr. WHEELER. Plus 100,000 carryover, in the area of 200,000 to meet the urgent, critical needs.

Senator BRADLEY. So just based upon size, not based upon what is in the area, which would apply more, would you say the CVP's need is equivalently large, in other words, instead of 100 maybe 400 or plus more?

Mr. WHEELER. It would be comparable given the scope of the CVP's impacts on fish and wildlife resources, yes.

Senator BRADLEY. So that the size of the CVP proportionately would be a larger amount needed to avert the endangered species threat and then a little bit more than that because of the fact that there are so many other resources like the wetlands?

Mr. WHEELER. Wetlands are critical at this point, and most of the State and Federal refuges, there are 16 in all, I believe in the State, are dependent on maintenance of this wetlands resources, which is in turn dependent on an adequate supply of water.

I will be happy, Senator, to provide specific figures if we have got them, with respect to both State needs and Federal needs.*

Senator BRADLEY. That would be extremely helpful because one of the things that we are trying to do is to figure out how much water. I mean, if it is not much water, well, there are various ways to try to achieve that objective. At the same time you do not want to be in the situation, I assume, where you have the Federal court running the Central Valley Project.

Mr. WHEELER. Certainly not.

Senator SEYMOUR. Mr. Chairman.

Senator BRADLEY. Senator Seymour. Senator Burns, do you have——

Senator BURNS. Go ahead.

Senator BRADLEY. Senator Seymour.

Senator SEYMOUR. Thank you, Senator Burns. Mr. Wheeler, in my opening statement I spoke about a potential, at least from my view, conflict between uses, each being fish and the protection of that resource, and on the other hand, at the same time, wanting to protect the refuges.

The question I have for you is do you see that type of conflict in the area of, for example, the Trinity River, and further in the Red Bluff area, in those two areas you are trying to do two things in water transfer at the same time. And therefore, if you have got, as provided in this bill, you want to feed additional water supplies to the resource, I do not know logically or practically how you do that without taking it away from the other area you have made a promise to, which is the refuges.

Mr. WHEELER. You have pointed to the essential dilemma in all of this, of course, we have got to establish priorities; we are having to make some very difficult choices.

We had recently a decision to make here in the State, as between species, even, within the same watershed. Because there just is not enough water to meet our critical emergency needs.

So I think you are right, we have to be mindful of priorities as we divert resources from one use to another, and that is within species, that is within wildlife types, it is between ag and urban and environmental needs.

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* The information referred to was not received at the time of printing.

Senator SEYMOUR. But just on those two environmental areas, it seems to me concerns, and rightful concerns that we do want to answer, it seems to me that if we place in cement Federal legislation that mandates the State of California through the CVP project to achieve both objectives at the same time, that becomes an impossibility, and takes away any creative solutions that the State of California might come up with on its own.

Mr. WHEELER. I think you are right. I think, as you pointed out, and others have already, that there are several such creative activities already underway here in the State. We want to nurture and support those.

Senator SEYMOUR. Thank you, Mr. Wheeler.

Senator BRADLEY. Senator Burns, did you have a question?

Senator BURNS. Thank you. Mr. Wheeler, I guess my next question, trying to achieve all of those goals, have you got enough water to do it? If you wanted to——

Mr. WHEELER. That is the $64 question.

Senator BURNS. Well, sometimes we are talking about needs, but have we got the resources to do it?

Mr. WHEELER. One of the ways in which the Governor, there are a couple ways that we need to approach this, and one is the consensus project that will make its first recommendations to us in July involving suggestions from the ag community, from the conservation community and from the water users.

The other is the Growth Management Council. We have talked a lot about the effects of the drought here, and only in passing about the effects of this huge population growth that has been mentioned. We need to look at water in the context of growth and development to determine just how we are going to meet the State's needs, not just for fish and wildlife, but for agriculture and for urban users as well.

So there is not any ready answer to that question right now. We are moving toward an answer that will require much more efficient use of the water we have at our disposal today and the development of some additional resources.

Senator BURNS. Now you are familiar with the drought legislation that is pending now?

Mr. WHEELER. Yes, sir.

Senator BURNS. Most of these activities that you would like to see happen, are they being addressed in that piece of legislation?

Mr. WHEELER. The short-term ones, yes. Those have to do with authorities to the Federal agencies who are at work in California on issues of relevance to fish and wildlife, essentially the Bureau of Reclamation and its operation of the Central Valley Project.

Senator BURNS. Listening to the testimony here this morning, is California under, with people moving in all the time and the amount of growth in population that you are experiencing here in California, are we looking at a permanent drought?

Mr. WHEELER. We do not know the answer to that question. We are in the fifth year. We could have a sixth. I think we have to change our——

Senator BURNS. I mean if it rained every day.

Mr. WHEELER. Well, we had a miracle March, we had a record rainfall in March, 292 percent of normal, as Dave Kennedy, I think, can attest. And we still have a 50-percent supply situation in the State.

So we may have to change the meaning of the word normal. I think that is what you are suggesting.

Senator BURNS. Thank you very much.

Senator BRADLEY. Mr. Wheeler, I want to thank you. One last question. Can you see any reason why the Central Valley Project, Central Valley water rights holders should not be fully subject to State law?

Mr. WHEELER. No, except as in the case of National Environmental Policy Act, which enforces its constraints upon all activities, State and Federal.

Senator BRADLEY. So that it would help California in trying to plan for future shortages or whatever, to be able to direct that water, as well as the State water projects?

Mr. WHEELER. Absolutely, and that is why we have testified to you, Senator, that we support the provision of your bill which would study the integration of the CVP and the State water project.

Senator BRADLEY. And making it very clear that a CVP water right is essentially the same as any other State water right.

Mr. WHEELER. Subject to the control of the Water Resources Control Board, yes.

Senator BRADLEY. Mr. Wheeler, let me thank you very much for your testimony and—yes, Senator Seymour.

Senator SEYMOUR. Might I slip in just one last question very briefly?

Senator BRADLEY. Surely.

Senator SEYMOUR. Thank you, Mr. Chair.

Mr. Wheeler, Congress approved the coordinated operating agreement to ensure conjunctive operation of the CVP in the State system.

My question is this: is there not a danger that by mandating the use of the CVP for fish and wildlife we could upset the purpose of the COA and actually frustrate environmental enhancement if the State system could be more efficient?

Mr. WHEELER. I am not sure I am able to respond to that question without recourse to my friend, Dave Kennedy. The COA is an effort at integrating the functioning of the two systems. What we have said before and what I would repeat here this morning is that we believe the Central Valley Project ought to be administered parallel to the State water project in all of its respects, including an emphasis on the protection of fish and wildlife resources.

I think the ideal would be absolute parallelism with respect to the operation of both systems.

Senator SEYMOUR. Thank you, Mr. Chairman.

Senator BRADLEY. Thank you, Senator Seymour. And thank you, Mr. Wheeler, for your testimony.

Mr. WHEELER. Thank you, Senator.

Senator BRADLEY. I see now that we do have Senator Roberti here. Senator, only because you are who you are we are allowing you to come before the committee today and at this time. Thank you so much for coming by.

STATEMENT OF HON. DAVE ROBERTI, PRESIDENT PRO TEMPORE, CALIFORNIA STATE SENATE

Senator ROBERTI. Thank you, thank you for coming to Sacramento, and thank you for your courtesy.

It is a pleasure to come here today to address you briefly on what is one of our most pressing problems facing the State of California, and that is the issue of our water system.

Earlier this year I announced that I wanted to reinvigorate the State Legislature, and particularly the State Senate, into the question of getting once again more involved in trying to attempt a solution to some of the water questions that have been bedeviling us and our State.

And since that time the State Legislature has conducted, under the auspices of the State Senate, a water summit in Los Angeles on April 5th, and we plan another one in northern California sometime early this summer.

Let me briefly share with you what my philosophy is in this very important question. I believe that all parties in water politics must share some of the pain of redirecting our water priorities because there will be no solution that will not cause some hardship somewhere. That is the nature of the world of water that we live in.

Our State and California is distinguished by its versatility. Any solution must accommodate all interests, not extinguish one interest to benefit another.

For example, agriculture is an important part of our State, not only economically but culturally, as well. However, our fisheries industry, as you have heard, and our natural wetland resources have been decimated due to the water supply decisions made decades ago. These relationships need to be reexamined and innovative solutions must be implemented.

As you are progressing with your legislation to improve the relationship between State and Federal water projects, I would like also that you keep in mind the long standing problem that exists with some of our resources, in particular the problem that exists with Mono Lake. You may have seen in recent news articles that have talked about a possible solution that is evolving due to discussions between the State Lands Commission, the Mono Lake Committee, and the Los Angeles Department of Water and Power. An integral part of this proposed solution would require the transfer of Central Valley Project water through the State project. This is the very type situation that makes the goals of your legislation very necessary.

I have agreed with the Chair of our State Lands Commission, Lt. Governor McCarthy, to assist at the State level. I am asking the agricultural community to join us at the table as partners to find an equitable solution.

I would like to ask that you and your colleagues work with us to design the appropriate Federal legislation to end what has been one of the most explosive and controversial issues in California's water wars.

I am very pleased with the goals of your bill S. 484. I believe that providing the State of California with more authority to integrate the operations of the Central Valley Project is the type of innovative solution that must be considered and embraced.

Easy answers and traditional solutions cannot be part of our agenda. There is too much at stake. In order to preserve the natural diversity of California we must incorporate the multitude of interests and uses to develop a comprehensive water plan.

I pledge to you that we will work with you on such a plan. I look forward to testifying on future days with more concrete proposals as your legislation evolves and our work in this area evolves. Thank you, Senators.

Senator **Bradley**. Senator Roberti, let me thank you for taking the time. I know that you have staked out a real leadership position here and put your own version out of what should happen to California water and I compliment you on that. And I can assure you the subcommittee will look at your proposals and your suggestions with great respect.

Senator **Roberti**. Thank you very much, Senator.

Senator **Bradley**. Our next witness is a panel of three. It is Cal Dooley, who is accompanied by Mayor Victor Lopez of Orange Cove, California. Welcome to the subcommittee, again. Congressman Dooley. You were extremely forceful in Washington with your presentation, and we welcome you once again to the subcommittee.

STATEMENT OF HON. CALVIN DOOLEY, U.S. REPRESENTATIVE FROM CALIFORNIA; ACCOMPANIED BY VICTOR LOPEZ, MAYOR, ORANGE COVE, CA; AND THOMAS BOHEGIAN, FRESNO CITY COUNCIL

Mr. **Dooley**. Well, thank you, Senator Bradley, and it is a pleasure once again to be here and testify, and also with you, Senator Seymour and Senator Burns.

I just want to commend you, Senator Bradley, for the effort that you have put in to trying to get an understanding of all the complexities surrounding this issue. And I think the participation and the attendance at this hearing is certainly indicative of the concern that a lot of us in California share.

I would like to say that in Mr. Seymour's comments that I associate myself with many of your remarks and I think we are going to hear from witnesses later in this program when you are asking for specific proposals, I know the Central Valley Project contractors are going to be presenting a proposal which I think goes a long ways to addressing some of the environmental concerns while still maintaining a concern to the economic consequences that could result from environmental mitigation.

When I testified before the subcommittee on this bill in Washington I stressed the need to consider how the entire Central Valley's economy, not just irrigators and wildlife, will be affected by whatever Congress does to alter the operation of the Central Valley Project. The well-being of hundreds of communities and many thousands of people depend upon the certainty of receiving adequate supplies of water from the CVP.

And I believe that this bill, as written, would eliminate that certainty and threaten the well being of those communities.

As a specific proposal I would suggest that we need to be considering an amendment that would delete the requirement that prevents the eliminations of long term contracting of water supplies. Also when we started talking we had Senator Cranston referring to the 1-year contracts up to the 20 years foregoing 20 percent of the water as an incentive, I somewhat associate myself again with Senator Seymour that it is perhaps more extortion. And that perhaps we have to be looking at how we can find a way that we can allow for long term contracts that will ensure that we can maintain some certainty for farmers and for businesses through this entire Valley to have access to the lending and the financial resources that they know to ensure their longer-term viability.

In fact, this bill, which we are also concerned about is that it could by allowing the State and the EPA to eventually decide about the Bay, Delta, when you get involved with that there is also the certainty that there will be litigation. And in fact, this bill invites this litigation, and how long will that take.

If any water, if farmers or contracts have any water for the next season, many of them will not go on for long that way, and they will not be able to. They will not be able to get the financing they need to operate. That is a simple fact.

We regard the ban on long term contracts as punitive because we see no practical purpose for it. The Supreme Court has made it clear that the State already has the authority to regulate the operations of the CVP, even to reallocate water for environmental purposes. New CVP water service contracts include provisions explicitly recognizing that authority. And at a hearing in Washington you said that the primary purpose of this bill was to stop Federal intervention in California affairs. I do not see how a prohibition of long term contracts, a provision opposed by the State of California, accomplishes that purpose.

As you know, I am a life long farmer. My family has farmed in the San Joaquin Valley for four generations. We do not receive Federal or State irrigation water, but I represent an area served by the Friant Unit of the CVP. Because Friant Unit contracts are up for renewal now, the impacts of this bill will be felt in my District first. And as I pointed out in Washington, the average farm size in the Friant Unit is only 100 acres. And most of the farms down there are small family operations, exactly the kind of farm that the reclamation program was designed to foster. It is the communities that depend on those farms that will suffer if we make a mistake with this bill.

The two gentlemen with me today represent those communities. They are not farmers; they are elected officials who are here because they know that this legislation will affect every single one of their constituents.

Tom Bohegian is a member of the Fresno city council. Fresno is the second largest city in the Central Valley and receives some of its municipal water supply from the CVP. More importantly, Mr. Bohegian and the Fresno city council have direct experience in resolving conflicts between urban and agricultural users.

Victor Lopez is the Mayor of Orange Cove, California. A small farming community in Tulare County that is suffering severe hardship as a result of the drought and the December crop freeze. He will be indicating to you some of the problems that they are facing.

Certainly we are here to try and work together to develop in a cooperative effort that we can see a bill result that will meet the needs of Mr. Bohegian and Mr. Lopez and all the contractors.

[The prepared statement of Mr. Dooley follows:]

PREPARED STATEMENT OF HON. CALVIN DOOLEY, U.S. REPRESENTATIVE FROM CALIFORNIA

Mr. Chairman, Senator Burns, Senator Seymour, it's a pleasure to address you once again on the Central Valley Project Improvement Act. I want to commend Senator Bradley and the Subcommittee for holding this third hearing on the bill, and especially for holding it here, in the heart of the Central Valley. You have gone to a great deal of effort to seek out a wide variety of perspectives and ideas on this complex legislation. We are all very grateful for that and we look forward to working with you to incorporate the best of those ideas into your bill.

Later, other witnesses representing CVP water users will outline a proposal that I believe is an excellent starting point for discussions. I know that you will give it every consideration.

When I testified before the Subcommittee on this bill in Washington a few weeks ago, I stressed the need to consider how the entire Central Valley community, not just irrigators and wildlife, will be affected by whatever Congress does to alter the operation of the Central Valley Project. The well being of hundreds of communties and many thousands of people depend upon the certainly of receiving adequate supplies of water from the CVP. I believe that this bill, as written, would eliminate that certainly and threaten the well being of those communities.

Of primary concern to me are the provisions that would effectively eliminate long-term water service contracts for agriculture. I say "eliminate" because the bill prohibits contracts longer than one year until a long list of conditions are met—and it is not clear when, how or even if those conditions can be met.

For example, the bill prohibits long-term contracting until the Bay/Delta Process is completed and the Environmental Protection Agency has approved new water quality standards. When will that be? Whatever the state and EPA eventually decide about the Bay/Delta, there is certain to be litigation. In fact, this bill invites litigation. How long will that take? How long will farmers have to go from year to year not knowing how much, if any, water they will have for next season? Many of them will not go on for long that way. They won't be able to. The won't get the financing they need to operate. That's a simple fact.

I regard the ban on long-term contract as punitive because I see no practical purpose for it. The Supreme Court has made it clear that the state already has the authority to regulate the operations of the CVP, even to reallocate water for environmental purposes. New CVP water service contracts include provisions explicitly recognizing that authority. At the hearing in Washington, you said that the primary purpose of the bill was to stop federal interference in California's affairs. I don't see how a prohibition on long-term contracts, a provision opposed by the State of California, accomplishes that purpose.

As you know, I am a lifelong farmer. My family has farmed in the San Joaquin Valley for four generations. We don't receive federal or state irrigation water, but I represent the area served by the Friant Unit of the CVP. Because Friant Unit contracts are up from renewal now, the impacts of this bill will be felt in my District first. As I pointed out in Washington, average farm size in the Friant Unit is only 100 acres. Most of the farms down there are small, family operations, exactly the kind of farm the Reclamation program was intended to foster. It is the communities that depend on those farms that will suffer if we make a mistake with this bill.

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Victor Lopez is the Mayor of Orange Cove, California. A small farming community in Tulare County that is suffering severe hardship as a result of the drought and the December crop freeze. Orange Cove's municipal water supply also comes from the CVP, and the economic vitality of the community is entirely dependent on a certain agricultural water supply.

These gentleman can explain to you far better than I the importance of providing certainty for the entire agricultural community.

As I said in Washington, Mr. Chairman, I sincerely believe that correcting the environmental problems in the Central Valley and ensuring the vitality of its agricultural economy are not mutually exclusive. We can have both if we identify realistic and attainable environmental goals, develop a consensus on what needs to be done to achieve those goals, and devise a specific plan and firm timetable for attaining them.

Such an effort will have to begin with a recognition that there are problems and that they cannot be solved without sacrifices. The past can't be the future. But the future must include a stable and productive agricultural sector. That's why the Central Valley Project was built. The question before us now is, how do we make the project work better? The answer should come from Californians, and I'm glad you're here to listen to us.

Senator **Bradley**. Mr. Bohegian.

Mr. **Dooley**. Mr. Lopez.

Senator **Bradley**. Mr. Lopez.

STATEMENT OF VICTOR LOPEZ, MAYOR, ORANGE COVE, CA

Mr. **Lopez**. Yes, Mr. Chairman. My name is Victor Lopez. I am the Mayor of the city of Orange Cove, California.

First of all I would like to say that I am honored to be here before you, Mr. Chairman, Members of the committee. I appreciate this opportunity you are giving me to give testimony before this body.

As you are all aware, Mr. Chairman and Members of the Board, in December of 1990 Orange Cove was struck by the third worst disaster in the history of the State of California, the freeze of 1990. Orange Cove lost 2,300 jobs. We closed down seven packing houses that employed farm workers and the packers of our community. We lost $50 million in crops, $10 million in payroll. My community was totally disrupted, totally. And now we have S. 484 that would only impact my community worse.

I believe very strongly, Mr. Chairman, that we have to be speaking about bread-and-butter issues, not the birds and the bees. It disturbs me a lot, Mr. Chairman, that my community is being destroyed, totally destroyed; 70 percent of the jobs were lost in my community and nobody came forward to assist my citizens. To date some of them are going hungry, some of them with no shelters, some of them without medicine, some of them without clothing and here we are talking about wildlife rather than human beings.

As the Mayor of my city I am real concerned about this, Mr. Chairman. I believe that the CVP has led the fight in preserving the wildlife and I believe that they will keep on leading the fight to preserving the wildlife. But I believe that we ought to keep in foresight that agriculture, especially in our area of Fresno, Tulare and Kern, we are the leading agricultural areas in the Nation. We are the food basket of the world. The farmworkers in my community want workfare, not welfare.

I ask you to be very careful, Mr. Chairman, not to put is in a dilemma where we cannot afford to support our children. I know there are tremendous impacts in education, medicine, senior citizens, housing, economic development, and I know that you are going to be concerned about us, the farmworkers of my community; and I know that you can preserve the wildlife without impacting the farmworkers of my community.

And that is why I am here before you asking you to please consider giving us enough water so that we can keep on being prosperous and being the capital of agriculture in the world.

I am here to ask you, Mr. Chairman, that if you do not provide us with the water, Orange Cove is now looking at industries coming to my community. And I will give you a perfect example. The Marcus Brothers out of San Jose, California, after this freeze struck me, I am not willing to go through this again, to the suffering of looking at children going hungry, looking at the homeless of my community.

So I am being objective. I have gone to the Marcus Brothers and asked them to bring their industry to my community. A multi-million dollar project. They will employ immediately, from day 1, 150 employees. And the first question they asked, Mr. Chairman, was do you have the water. I was ready to respond last week, then I heard of S. 484, it disturbs me. I have not responded to the Marcus Brothers because I cannot. I will not lie to them. I will respond to them, Mr. Chairman, until after you and this committee has assured us that Orange Cove will have water, so that Orange Cove can prosper and Orange Cove will no longer suffer.

We are human beings, we have to be considered as human beings. We have to be given the opportunity to have employment for the citizens of my community. The farmworkers are the hardest workers probably in the whole world. They work very hard. They want jobs, again, not welfare.

I leave it in your hands, Mr. Chairman, that you and this committee will consider my community and the whole San Joaquin Valley, that we need water. And we will work with you in amending your bill to make it prosperous, not only for wildlife, but to keep up the culture in California as the number 1 State in the Nation, it is only because of you and this committee, Mr. Chairman.

I thank you for the opportunity. I am here to answer any questions you might ask.

Senator **Bradley**. Thank you very much, Mr. Lopez.

Mr. Bohegian.

STATEMENT OF THOMAS BOHEGIAN, FRESNO CITY COUNCIL

Mr. **Bohegian**. Thank you, Senator, Members of the committee, Senator Cranston. It is an honor for me to have an opportunity to tell you a little bit of our story.

By way of introduction, I am Tom Bohegian, member of the city council of Fresno. Fresno is a community of approximately 360,000 people, about 175 miles from here. It is right now the 46th largest city in the United States, and is amongst the fastest-growing cities in the United States, which raises some issues relative to growth and what-have-you.

It is also a very ethnically diverse community, probably one of the most diverse in the United States of America.

While I am not a farmer, a large part of our economy is directly related to the health and well being of agriculture. When agriculture has economic difficulties it goes to the core and has a real impact on everything from our budgets to our social institutions.

As much of agriculture in our area is dependent on the Central Valley Project so is the city of Fresno and other Valley communities as Victor has alluded to.

While Fresno is the largest city in the United States totally dependent on well water for its drinking and industrial supplies, we are also the beneficiary of approximately 60,000 acre-feet of water per year of entitlement from the Friant Unit of the Central Valley Project. That water has been critical to our artificial recharge program in the city of Fresno. Without it there would have been a dramatic drop in groundwater levels under the city of Fresno, which would have compounded an already very serious groundwater contamination problem from a variety of sources.

The city of Fresno has not sat on its hands in dealing with this problem, and I think this is an important thing, is that everybody needs to be walking down the same road together to deal with the problems we face.

We have instituted, and this is a tough one politically, when we did it without any forcing at the State or Federal Government, we are installing 80,000 units of water meters in our city. A tough political decision, but it had to be done, and it is going to be done.

In addition to that we are implementing an aggressive conservation program on new construction as well as retrofit in the community.

But I cannot overstate the importance of that 60,000 acre-foot entitlement from Friant. We have recharged last year 56,000 acre-feet into the ground. That made the difference in seeing even further drops in the groundwater level. If that had occurred we would have had an even more serious problem than we have.

The message of S. 484, as I read it, is that the operation of the Central Valley Project has to adapt to changing times. In itself I do not disagree with that goal. I do have a problem with measures, though, that can seriously disrupt the economic well being of not only the city of Fresno and its residents, but of the people who contribute in the greater Fresno County and surrounding area to the economy.

We have, like everybody else in this State and in this Nation, a budget deficit right now that we are dealing with. That has a real impact in terms of human beings and their families. That is the concern that I have and I would ask you to consider that as you move through this process and you move toward mark up.

A key element to this, though, is the uncertainty of water supplies that this legislation, I believe, would introduce into the whole equation. And that is the additional burden I am talking about. It is an additional burden for the cities, it is an additional burden for those family farms that Cal was talking about. And the concern that I have is that if, for example, one element, if water can be moved throughout the system and there are proper controls put on that, that means that essentially water goes to the highest bidder.

In the case of the city of Fresno, I will be really honest with you, we are paying $10 an acre-foot for that entitlement. That entitlement, though, as I have described, has had huge beneficial impacts. If we have to compete against huge metropolitan areas, no matter where they might be, or if cities like Orange Cove have to do that, we are going to be at a severe disadvantage. And that is a concern to me.

In addition to that, agriculture will be at a disadvantage and there has to be ample consideration of those issues.

You know the Central Valley Project as well is not the only contributor to the problems that we have environmentally. There are other projects for example, the Bureau of Reclamation operates the facility at Pine Flat which is in the equation and there are numerous others.

So what I would say is if mistakes were made when certain of these projects were built, let us thoughtfully go look at the problems and try to address them in a constructive fashion. I think we can do that.

At the same time, let us not repeat what might have been done in the 1940's and the 1950's and do make changes to the operations of the projects that could have detrimental impacts that I have outlined. I think that there is a way to get to where folks need to be.

One last thing I would like to do is thank you for the opportunity to speak, and in addition to that I would like to invite you, individually, collectively, to come to Fresno, to come to the surrounding area. I am not saying that from the standpoint of coming to see how wonderful we are. I want you to see first hand the impact, the good that has been done by the Central Valley Project in the cities, as well as the farms. I think if that were done it might help contribute to a more beneficial and positive outlook on this project and maybe would affect the legislation.

Again, I thank you very much.

Senator **Bradley**. Thank you very much, Mr. Bohegian, for your testimony. Let me thank all three of your for your testimony.

And, Mr. Lopez, both you and Mr. Bohegian indicated concern about S. 484's impact on water that would be used for municipal uses or for, I do not know what the Marcus Brothers do, but industrial uses, I suppose.

Would you feel any easier if we simply exempted municipal and industrial uses from any provision of this act?

Mr. **Lopez**. Well, Mr. Chairman, we depend solely on agriculture. And the municipality of Orange Cove goes hand-in-hand with agriculture. If agriculture is hurt, the farmworkers are hurt. Definitely I cannot say that industrial purposes will take care of the city of Orange Cove. We need agriculture. Agriculture is the livelihood of my community, sir.

Mr. **Bohegian**. What I would say, Senator, is that we do not want special treatment. The rules that are made have to be fair across the board. And the issue that Victor raises is that it is kind of like when our neighbor catches a cold, sometimes we get pneumonia. And that is a concern we have.

So we go hand-in-hand with the folks on the farms. And although we do not always agree on issues, because we do have disagreements, we have tried very hard in the city of Fresno to work with the irrigation district that delivers the water to our recharge basins. We would like to be on the same playing field as much as possible with those folks because they are an integral part of our community.

Senator BRADLEY. Well, let me ask you one other question if I could, because it occurs to me that you have expressed concerns about the costs, damage, et cetera, that might flow from diverting say 20 percent of the existing water contracts for fish and wildlife.

Have you considered the damage that might occur from doing nothing? For example, you could very well have a Federal judge in charge of the Central Valley Project and making a decision that more than 20 percent will be diverted for fish and wildlife. Or many of your farmers would put up as collateral farmland that has such serious drainage problems and high groundwater tables and toxic ponds that no reasonable banker is going to look at that and say that is sufficient collateral for a loan.

Or a situation where at some point the growers could be indicted criminally for violations of environmental laws. So I mean, there are problems of doing nothing. And I would simply urge you to consider that as well as what are clearly going to be some adjustments necessary involved in the bill.

Mr. LOPEZ. Mr. Chairman, the CVP is going to be proposing some alternatives and some methods of conservation in protecting the wildlife. My concern is that being that we are the agricultural capital of the world, and to be talking about not having sufficient waters, I think that it will impact my community, it will disallow economic development in my community and I do not think that nobody will be looking at my community if I cannot say that I provide the water. That scares me to think that, Mr. Chairman.

Mr. BOHEGIAN. If I may, in the city of Fresno, I mentioned this a couple of times, we have had huge challenges relative to water just in our own area. The last thing that I would suggest is to do nothing. Because frankly, that tends to be an American tradition, we wait till the problem gets serious enough and then we have to spend twice as much to solve the problem. I am not asking that.

What I am saying is that there needs to be ample input, there needs to be ample consideration that when steps are taken, and I think Cal made mention of this, if there is not certainty knowing that there is going to be an amount of water, whatever it is, you cannot operate a farming operation, particularly when you get into crops, for example, orchard crops that are not, you know, year to year crops. That can be devastating. Because trees do not operate on a water deficit. When you turn them off they die.

And so that needs to be cranked into the formula. I believe it can be. There are changes coming, I believe that, but I think that some of the elements of this legislation make me more than a little nervous. And that is why we all came up here today.

Senator BRADLEY. Well, I appreciate your testimony very much. And, Congressman, I appreciate you bringing the representatives from the communities in the Valley to the hearing today. And I hear what you are saying. I think certainty is what the farmer wants when he looks at water. And certainty of whatever the supply is. You cannot have certainty if you are in a drought always, but certainty is a very critical element and I think you make that point very eloquently.

Senator Burns.

Senator **Burns**. I have no questions, thank you.

Senator **Bradley**. Well, let me thank all three of you for your testimony. And maybe you have given us some food for thought here, not only by your own legitimate concerns about municipal and industrial uses as you look at your own economic development, but also on the issue of certainty. I mean, maybe 20-year contracts are not long enough. Maybe we need to go to 30-year contracts or 40-year, but it has always been an exchange for some firm commitment on the amount of water that would also be available for fish and wildlife. I mean, certainty and fish and wildlife are not incompatible objectives.

Mr. **Lopez**. Mr. Chairman. I wanted to add, Mr. Chairman, that the Marcus Brothers are in the business of cheese.

Senator **Bradley**. Cheese, okay.

Mr. **Lopez**. They have a $20 million sales at this time.

Senator **Bradley**. Well, I am not from Wisconsin, so I am glad they are here.

[Laughter.]

Mr. **Bohegian**. Senator, we would love to see you in the Valley, too.

Senator **Bradley**. Thank you very much. Okay.

Mr. **Lopez**. Thank you very much.

Senator **Bradley**. Thank you. Our next panel is a rather large panel, and I assume that we have enough seats at the table. We have Marc Reisner, water policy consultant; Brian Gray, professor of Law at University of California; Jean Auer, vice chairman of Drainage Oversight Committee; Karen Garrison, research scientist of Natural Resources Defense Council; Martha Davis, Mono Lake Committee; Les J. Small, Los Angeles, California.

This is the second-largest panel, I think, that we are going to have today, so this is the day of big panels. It is very difficult, I know, for those who are on a panel to do this because each of you have come with your own thoughts. But if you hear your own thoughts being uttered by the speaker immediately previous, do not feel it is absolutely necessary that you repeat those thoughts. But I hope that each of you will have your own contributions and, of course, the committee welcomes those contributions.

Marc Reisner, let us begin with you.

STATEMENT OF MARC REISNER, WATER POLICY CONSULTANT, SAN FRANCISCO, CA

Mr. **Resiner**. Mr. Chairman, committee Members, these comments were too long so my wife went through them with a red pencil and these are really her comments now and not mine.

My name is Marc Reisner, I wrote a book called "Cadillac Desert," which is a history of water policy in the West, and description of the water policy reform called "Overtapped Oasis." I represent no one here particularly, except my daughter, Ruth, who is the first Reisner to be born in California and who is going to inherit the State.

Mr. Chairman, I have nothing but praise for your bill S. 484 and I might add for your extremely diligent and persevering efforts in helping to solve what is really the worst long term crisis California is going to face.

I have been in the water policy reform business myself for 15 years and I know that anytime anybody talks about any kind of reform you always have a holy inquisition that comes out and tells you why nothing can really change. And the CVP beneficiaries are a holy inquisition that would have done Pope Pius XII proud. So I applaud your efforts in this regard.

The Central Valley Project is the most permanent man-made feature in California's landscape for better or for worse. It has enriched our State financially; it has enriched the Nation at large; it has also impoverished our State environmentally.

I do not know how anybody can argue with those points. Those are simply facts.

The issue before us today, as I see it, is repairing some of the tragic environmental damage the CVP has caused without sacrificing the basic economic and material benefits it provides us.

The issue is not fish versus food because fish are food, the highest quality food we have really. Nor is it hydropower versus recreation. I think the real issue is one of historic balance. It involves fairness, restitution, and at a deeper and more important level, sustainability.

I am not going to repeat the statistics you have heard all day long about the decline of the wetlands and anadromous fisheries in the State. But I will say that even though the CVP is not solely responsible for these losses. I do not think anybody tries to say that it is. But it does bear a very important share in the blame.

Fisheries biologists have clearly identified the impassable fish barriers of Shasta Dam and Friant and various CVP diversion facilities as the most important factors in the decline of all three runs of salmon in the Sacramento/San Joaquin watershed.

High seas drift-net fishing, in my opinion, is a criminal outrage, but the salmon were in steep decline long before such nets were ever used.

California's fishing industry is really the oldest economic industry in this State, with the exception of a few modest port facilities, it is totally unsubsidized. CVP irrigation farmers, by contrast, are deeply subsidized. Yet California's fishermen who are now literally fighting for survival have never received any kind of compensation, material or financial, for having had their livelihoods all but stolen away from them.

Your legislation, Mr. Bradley, is really the first significant restitution that they have ever been offered. I think in that sense your bill follows a very American and very laudable tradition.

But in a broader sense your bill, as I read it, brings the CVP into the 20th century. Although the original authorization came in 1933, the philosophy behind this project really grew out of the 19th century. Private and even State reclamation efforts in those days were a long recitation of failure. As a result, and this was an astonishing break with traditional economic and American social tradition, Congress decided that federally supported irrigation ventures represented the only hope for prosperity, stability and population dispersal in the West.

Now obviously today everything has changed. California's problem is not too few people, it is too many. Agriculture's chronic problem is not production, but over production. Salmon which were so plentiful in the 1930's that it cost 10 cents a pound now costs $10 a pound. There is an apocryphal story that workers who built Shasta Dam demanded in contracts not be fed salmon more than three or four times a week. That is how many fish there were in the river in those days.

Now, against this background of new values, realities, and needs, the CVP is an almost wondrous anachronism. The State sells water to farmers for as much as $100, $130 an acre-foot, a price that reflects its real cost. The CVP still sells water for as little as $2.50 per acre-foot. Major, even drastic water conservation programs are underway in many California cities. But with CVP water selling by weight at a price 2,000 times cheaper than dirt, and I called a landfill company to check this out, and through 40-year contracts at a fixed price, its agricultural customers have little or no incentive to conserve.

Some people try to make a States' rights issue out of this. The State water law now explicitly encourages water transfers of water marketing, yet many legal scholars interpret the CVP rules, or as they interpret the CVP rules, even willing farmers cannot legally trade their water to the urban area in greatest need in these, which is southern California.

Now I happen to share the concern of many farmers that this State is becoming too urbanized. I believe absolutely in protecting our most valuable farmland and protecting it as we protect the national parks. And I am willing to pay higher taxes to achieve that end.

But higher water costs and a modest donation, as you have it in S. 484, for environmental restoration, those are not the real threats to California farmland. The greatest threat is farmers selling their land, not their water rights. In fact, some of our brethren in the farm community, as I interpret their position on your bill, think they should be able to sell their land at any price the market will bear, but they should not be able to sell their water. Bearing in mind what Emerson said about consistency, that is still an inconsistent position, to say the least.

Now another threat to agriculture is over production. Most of the crops that we produce today happen to be relatively low value crops, that we over produce, relatively low value crops that often consume inordinate amounts of water. It is wrong to blame the farmers for raising irrigated pasture in a desert climate. But it is right to blame water pricing and water policies that encourage so much livestock and dairy production that California ships cheese to Wisconsin. Livestock, much of it raised on CVP water, consumes about twice as much water as California's entire human population. Most Californians do not know that, but if they did, I can hardly believe they would want that situation to persist. Certainly not if their tax dollars are encouraging it through cheap water and price supports and free flood control.

Your bill, I think, is going to inevitably result in some land retirement, some shifting in crop patterns, and perhaps some economic pain. But let us not ignore the terrible pain being experienced even as I speak by families up and down the coast in the port communities where the salmon are not showing up any more, the striped bass is statistically nonexistent, and let us not be so anthropocentric that we are inured against the pain of migratory water fowl who have almost run out of winter habitat.

Now, I would like to make just really one suggestion, Mr. Chairman, about your bill, and this bears in mind what I said about——

Senator BRADLEY. If you could, Mr. Reisner, make that in a minute, I would appreciate it.

Mr. RESINER. All right. One suggestion is that some of us in the environmental community are working with the rice growing community on a project that might greatly enhance water fowl habitat in the Sacramento Valley. Rice lands are ideally suited for conjunctive use. They can raise rice in the summertime and can raise water fowl in great numbers in the winter. In fact, they do. They can serve, in effect, as de facto wetlands and as storage at the time of year we need it most.

I would hope that there is some way that we can, through this bill or in some other way, protect the State's core rice acreage in view of its very substantial importance to migratory water fowl.

Thank you very much for your time.

[The prepared statement of Mr. Reisner follows:]

PREPARED STATEMENT OF MARC REISNER, SACRAMENTO, CA

Mr. Chairman and members of the subcommittee, my name is Marc Reisner. I wrote a history of water and the American West entitled *Cadillac Desert,* and coauthored a prescription for water policy reform called *Overtapped Oasis.* I appear before you representing no organization or professional affiliation. I hope, though, that I speak for my two-year-old daughter, Ruth, the first Reisner to be born in California and the second to be born in America. She is going to inherit this state. I am honored that you have invited me to testify here today.

Mr. Chairman, I have nothing but praise for your bill, the Central Valley Project Improvement Act, and for your extremely diligent and perservering efforts to help us solve California's worsening water dilemma. I have heard some Californians accuse you of carpetbagging. No such accusations were made, of course, when the federal government first came in here and built the CVP—at least until it tried to enforce the acreage limit provisions of the act. I, for one, believe we are most fortunate that a distinguished Senator from a wet eastern state has taken such a profound interest in solving the most serious long-term crisis facing what is despite our quixotic efforts to pretend it isn't—a fundamentally arid state.

Mr. Chairman and members of the subcommittee, the Central Valley Project is the most permanent man-made feature in California's landscape, for better or worse. It has enriched our state financially and materially, as well as the nation-at-large. It has impoverished our state environmentally. I don't know how anyone can argue with those points. They are simply facts.

The issue before us today, as I see it, is repairing some of the tragic environmental damage the CVP has caused without sacrificing the basic economic and material benefits it offers us. The issue is not fish versus food, as some would put it, because fish are food—the highest-quality protein food there is. Nor is it hydropower versus recreation. As a whitewater boater, I know that dams can provide summer water releases and enhance recreational opportunities in a state with a dramatic, wet-and-dry seasonal climate. Nor is CVP reform a state's rights issue, except to the degree that the CVP, as presently operated, essentially contravenes evolving California law that encourages water transfers and the most economic and environmentally sound use of our most valued resource.

The real issue is restoring balance. It involves fairness, restitution, and, at a deeper and more important level, sustainability.

California's anadramous fisheries and wetlands are being depleted and destroyed at a rate that strongly suggests they are headed for oblivion. The winter-run chinook salmon in the Sacramento River—by far the most important salmon producer—has declined by 99.8 percent just during the past 20 years. The springrun chinook, by 90 percent or more. The striped bass has become statistically non-existent. (Some argue that the striped bass is an exotic species, but then so is virtually every agricultural crop grown in this state.) Since World War II, overwintering waterfowl populations have dropped by almost 95 percent.

The CVP is not solely responsible for these losses. But it bears an important share of the blame. As Shasta Dam was being built, salmon were so plentiful that the workers who labored on that structure demanded not to be fed salmon more than a few times a week. Fisheries biologists have clearly identified the impassable Shasta barrier and various CVP diversion facilities as the most important factors in the decline of all three runs of salmon. High seas drift-net fishing is, in my opinion, a criminal outrage, but the salmon curves were in steep decline long before such nets were ever used.

California's fishing industry is the oldest economic industry in the state. With the exception of a few modest port facilities, it is totally unsubsidized. CVP irrigation farmers, by contrast, are deeply subsidized. Yet California's fishermen—who are now literally fighting for survival—have never received any kind of compensation, material or financial, for having had their livelihoods all but stolen away from them. Our enemies in war have been treated better than our own fishermen. Your legislation, Mr. Chairman, is really the first significant restitution they have ever been offered. In that sense, your bill follows a very American and very laudable tradition.

In a broader sense, your bill, as I read it, brings the Central Valley Project fully into the 20th Century. Although the original CVP authorization came in 1933, the philosophy behind the project grew out of the 19th century. Private and even state reclamation projects back then were a long recitation of failure. As a result—and this was an astonishing break with American social and economic tradition Congress decided that federally-supported irrigation ventures represented the only hope for prosperity, stability, and population dispersal in the West.

Today, everything has changed. California's problem is not too few people, but too many. (We had just passed the five million mark when the CVP was authorized in 1933.) Agriculture's chronic problem is not production but overproduction. (In 1989, for example, 95 percent of the rice crop, 89 percent of the cotton crop, 78 percent of the wheat crop, and 80 percent of the corn crop in the U.S. was enrolled in federal price-support programs.) Salmon, so plentiful in the 1930's that it cost ten cents a pound, is now so scarce that it costs ten dollars a pound. And Californians today believe in environmental restoration as perfervidly as they believed in the CVP in 1933.

Against this background of new values, realities, and needs, the CVP is an almost wondrous anachronism. The state sells water to farmers for as much as $130 an acre-foot—a price that reflects its real cost. The Central Valley Project still sells water for as little as $2.50 per acre-foot. Major, even drastic, water conservation programs are underway in many California cities. But with CVP water selling, by weight, at a price two thousand times cheaper than dirt—I called a landfill company to check this out—and through forty-year contracts at a fixed price, its agricultural customers have little or no incentive to conserve. State water law now explicitly encourages water transfers and markets. Yet as many legal scholars interpret the CVP rules, even willing farmers cannot legally trade some of their water rights to the urban area in greatest need of new supplies: southern California.

Meanwhile, up in the Pacific Northwest, about a quarter of the cost of the third powerplant at Bonneville Dam was invested in fish passage facilities. But the CVP—a monumentally disruptive project designed and authorized almost entirely without environmental mitigation—has taken only a few very half-hearted measures aimed at restoring fish and wildlife habitat.

Mr. Chairman, I happen to share the concern of many farmers that our state is becoming too urbanized. I believe absolutely in protecting valuable farmland—in protecting it as we protect the National Parks—and I am willing to pay higher taxes to achieve that end. But higher water costs, and a modest donation for environmental restitution, are not the real threats to California farmland. The greatest threat is farmers selling their land, not their water rights. In fact, some of our brethren in the farm community—as I interpret their position on your bill—think they should be able to sell their land at any price the market will bear, but not be allowed to sell their water. Bearing in mind what Emerson said about consistency, that is still an inconsistent position, to say the least.

Another serious threat to agriculture is overproduction, which drastically lowers commodity prices. Most of the crops we overproduce today happen to be relatively low-value crops that often consume inordinate amounts of water. It's wrong to blame farmers for raising irrigated pasture in a desert climate, but it's right to blame water pricing and water policies that encourage so much livestock and dairy production that California ships cheese to Wisconsin. Livestock—much of it raised on CVP water—consumes twice as much water as California's entire human population. Most Californians do not know that, but if they did, I can hardly believe they would want that situation to persist. Certainly not if their tax dollars are encouraging it through cheap water and price supports and free flood control.

Your bill will inevitably result in some land retirement, some shifting in crop patterns, and perhaps some—I believe very minor—social and economic pain. But let us not ignore the terrible pain experienced even as I speak by families and whole communities at fishing ports up and down our coast. And let's not be so anthropocentric that we are inured against the pain of migratory waterfowl who have almost run out of winter habitat. Not long ago, a San Joaquin grower said on television that since we don't miss the passenger pigeon, we won't miss the salmon and wild ducks when they are gone. Fortunately, he doesn't speak for most members of the farm community. But I would certainly miss salmon and wild ducks. Wouldn't we all?

But bearing in mind what I said earlier about consistency, let me close with one suggestion regarding your bill. Some of us in the environmental business are working with members of the rice-growing community in the Sacramento Valley on a project that might greatly enhance waterfowl habitat. Rice lands are ideally suited for conjunctive use: they can raise rice in the summer and great numbers of waterfowl in the winter, provided they have access to winter flows. They can serve, in effect, as de facto wetlands at the time of year we need them most, and still produce human food and contribute taxable wealth. I would hope there is some way we could protect the state's core rice acreage in view of its very substantial importance—even today to the sustenance of our migratory waterfowl.

In my first book, I referred to federal water development as a uniquely productive, beneficial, and creative type of vandalism. I still believe that is true. But with enlightened water management we don't have to sacrifice the last of our wild salmon to subsidized steak; we don't have to lose our awe-inspiring waterfowl migrations to subsidized cotton. There's no law that says we can't have a healthy, diverse farm economy and a healthy, diverse natural environment, too.

What we desperately need is a law that says we can, and we will.

Thank you for giving me the opportunity to speak.

Senator **BRADLEY**. Thank you very much, Mr. Reisner. I will look forward to questions.

Mr. Brian Gray.

STATEMENT OF BRIAN E. GRAY, PROFESSOR OF LAW, UNIVERSITY OF CALIFORNIA, HASTINGS COLLEGE OF LAW, SAN FRANCISCO, CA

Mr. **GRAY**. Good morning, Mr. Chairman, Senator Burns, my name is Brian Gray, I am a professor of law at the University of California, Hastings College of Law in San Francisco.

My testimony today stems from work that I have done academically recently studying California water transfer law, CVP transfer policy, as well as the drainage problems in the San Joaquin Valley.

My testimony also derives in part from my service as counsel in the appeal of Peterson v. Department of Interior, which the U.S. Court of Appeals for the Ninth Circuit upheld the constitutionality of the reclamation format.

I support S. 484 for two reasons, because it redresses two imbalances in the CVP.

First, as Mr. Reisner described, it repairs harm to the natural environment and indigenous economies of the State that have been caused by the CVP over the last 40 years.

Second, I believe that the bill enhances California's regulatory authority over the project and does so properly.

The harm to the fisheries in this State, river flows, Delta water quality, wetlands have been well documented and I will not repeat them here.

I am sorry that Senator Seymour stepped out, I wanted to respond to one of his questions that he raised earlier and that is who should pay to repair this damage. It seems to me that the users of the CVP water should be the ones that bear the cost of this restoration project for the most part, and that is for two reasons.

First of all, as Marc Reisner just pointed out, CVP water is heavily subsidized and I hope the subcommittee does not lose sight of that fact. In the Peterson litigation it was documented that the average amount of the subsidy is approximately 90 percent throughout the system. That means farmers pay 10 percent of the cost to the United States for delivery of CVP water; the taxpayers of the United States pick up the remaining 90 percent.

Second, all of the external costs that have been done to the State are, of course, borne by the public at large.

For these two reasons it seems appropriate to me that the users of the project pick up the costs of restoration of these external harms rather than the taxpayers and rather than the public of California who have borne the costs of the project up to this point.

The second reason I support the bill is its deference to California water law. California has two aspects of its water transfer laws that are at the cutting edge of Western State water law. The first thing California water law does is recognizes conservation as a beneficial use of water. That means that the farmers and other users can conserve water and retain the rights to it, rather than losing those rights. Secondly, California law recognizes that that conserved water may be transferred; it may be transferred at a profit.

And it is the profitability, the ability to earn a profit on conservation that drives the transfer efforts. A lot of farmers cannot afford the costs of financing various water conservation investments. By being able to transfer water at a profit, they are both presented with the opportunity costs of the current practices and they are offered a means of financing needed conservation measures. And I think that the Imperial Irrigation District, Metropolitan Water Transfer that you are all familiar with is a perfect example of the application of those laws.

In contrast, the Bureau of Reclamation historically has applied a variety of limits to the transferability of CVP water. The Bureau provides, for example, that transfers may last for 1 year or less. Until recently it has prohibited transferors from earning a profit on transactions, although it has allowed transferors to receive a reasonable service fee.

Third, the Bureau has essentially prohibited the transfer of water from agriculture to most urban water supply agencies because of limitations in the transferees contracts with the Bureau.

And fourth, the Bureau has generally prohibited transfers from crossing the Sacramento/San Joaquin Delta.

My impression from talking with people at the Mid Pacific Region of the Bureau fairly recently is that they are willing to change these policies. They would like to begin deferring to State water law and incorporating State water transfer law. But they are hesitant to do so because of perceived legal restrictions and they are looking for guidance on this issue from Congress.

Your bill, Senator Bradley, would provide this guidance and would provide clear authority to incorporate California water law.

If I may I would like to respond briefly to just two of the questions that you raised in your letter. The third question that you asked was whether the bill should be amended to waive all Federal objections to State——

Senator **Bradley**. Can you respond in a minute?

Mr. **Gray**. Yes, I can. Should the bill be amended to waive all objections to State conditions on water rights permits. My answer would be no. The law right now, as defined by the Supreme Court in *California* v. *United States* is that, in general, State water law applies unless there is an explicit congressional directive that preempts State law.

It seems to me that strikes the appropriate balance. I would be concerned that if this bill were amended to broaden Federal deference to State water law, it could be interpreted as allowing for State preemption of some important Federal policies and laws such as the acreage limitations, the excess lands and pricing provisions of the Reclamation Reform Act, perhaps even the water conservation requirements in this bill, itself.

Secondly, I would like to urge you, I would answer your fourth question yes. Should there be substantial coordination between other Federal licensing agencies such as the Federal Energy Regulatory Commission and State law.

As you know, the Supreme Court has held that FERC is not bound by State water law when it licenses private hydroelectric projects; it is paradoxical that a large Federal water supply project is generally bound by State law. If you were to overturn the Rock Creek decision in this legislation, that would further strengthen California's ability to comprehensively manage its water resources.

Thank you very much.

[The prepared statement of Mr. Gray follows:]

Prepared Statement of Brian E. Gray, Professor of Law, University of California, Hastings College of Law, San Francisco, CA

Mr. Chairman and Members of the Subcommittee, my name is Brian E. Gray. I am a Professor of Law at the University of California, Hastings College of the Law, in San Francisco, California. Thank you for inviting me to testify this morning on S. 484, the Central Valley Project Improvement Act.

I will comment primarily on sections 4 through 6 of the bill, which address the CVP contracts, water management and conservation, water transfers, and fish and wildlife restoration. My testimony is based in part on academic work that I have conducted for the past four years, studying California water transfer law, CVP transfer policy, and legal issues associated with the problem of agricultural drainage in the San Joaquin Valley.[1] My testimony also stems from my involvement as counsel in the appeal of *Peterson* v. *Department of the Interior*,[2] in which the United States Court of Appeals for the Ninth Circuit upheld the constitutionality of the so-called "Hammer Clause" of the Reclamation Reform Act of 1982. In addition, I will attempt to answer the questions regarding potential amendments to S. 484 that Senator Bradley raised in his letter dated May 10, 1991.

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[1] This work includes:

Transfers of Federal Reclamation Water: A Case Study of California's San Joaquin Valley, 21 Envtl. L. No. 4 (Spring 1991) (co-author with B. Driver & R. Wahl);

The Transferability of Water Provided By the State Water Project and the Central Valley Project: A Report to the San Joaquin Valley Drainage Program (unpublished manuscript July 26, 1990) (co-author with B. Driver and R. Wahl);

Water Transfers in California: 1981-1989, Chapter II of "The Water Transfer Process as a Management Option for Meeting Changing Demand," Vol. II (University of Colorado 1990);

A Primer on California Water Transfer Law, 31 Ariz. L. Rev. 745 (1989);

A Reconsideration of Instream Appropriative Rights in California, 16 Ecology L.Q. 667 (1989).

I support S. 484 because it would correct two historical imbalances in the water supply functions of the Central Valley Project. First, the bill would begin to repair the harm to the natural environment and indigenous economies that has resulted from the construction and operation of the CVP. Second, the bill would enhance California's control over the project by requiring the recipients of project water to conform their irrigation practices to the conservation standards applicable to other California water users and by allowing project water to be reallocated according to California's water transfer laws. This deference to and incorporation of California law is important because the CVP appropriates almost one-third of the surface water available in the Central Valley basin and consequently profoundly affects the state's management of its water resources.

1. Restoring the Balance Between Consumptive Uses and Native Conditions

Throughout most of its history, the Central Valley Project has been operated for the principal purpose of supply water to consumptive uses—predominantly agricultural in the Central Valley and municipal and industrial in Valley towns and in the San Francisco Bay Area. In this endeavor, the project has contributed significantly to the remarkable growth of California's economy. At the same time, however, the operation of the CVP and the use of water supplied by the project have imposed external costs on the public. The construction of Shasta Dam has imperiled the native fishery on the upper Sacramento River and has interfered with the migration of anadromous fish in the lower Sacramento River and Delta Estuary. As a consequence, several runs of Sacramento River salmon are nearing extinction.[3] Diversions from the Trinity River into the Sacramento system have threatened the ancient fishing practices of the Hoopa Indian Tribe. Friant Dam eliminates the flow of the San Joaquin River during many months of the year, which has destroyed the fishery and riparian habitat below the dam. Combined with diversions from other water projects, the CVP pumps at Tracy alter the flow of water through the southern Delta, degrading water quality and disrupting the migration and spawning of salmon and striped bass.[4] The runoff and return flow from agriculture irrigated by project water has polluted the San Joaquin River, contaminated the groundwater beneath the Valley, and threatens to render over a half million acres of San Joaquin Valley land unfarmable.[5]

S. 484 would redress this imbalance between consumptive uses of CVP water and the external environmental and economic costs associated with the provision of that water in several respects. Section 6 directs the Secretary of the Interior to "protect, restore, and enhance fish, wildlife, and related habitat affected by the project." Section 4 augments this authority by generally prohibiting the Secretary from entering into new contracts for the consumptive use of project water, and from executing long-term renewals of existing contracts, until the provisions of section 6 are met and adequate water quality and flow standards are established to protect the Sacramento-San Joaquin Delta Estuary and San Francisco Bay. Section 8(g) requires the Secretary to develop and to impose best water conservation management practices designed to encourage water conservation and to reduce the amount of polluted irrigation runoff generated by CVP agricultural users. As discussed below, section 5 of the bill supplements these administrative powers by authorizing CVP contractors and water users to transfer project water as a means of encouraging and facilitating private conservation efforts.

The bill appropriately places responsibility for these water conservation and environmental restoration requirements on the CVP and the recipients of project water, rather than on the federal or state taxpayers. Users of CVP water have been blessed with an extraordinary government subsidy, paying on average less than 10 percent of what it costs the United States to supply the water to them.[6] This means, of course, that the nation's taxpayers pick up the remaining 90 percent of the internal costs of the water supply functions of the project. Moreover, the external costs of the project described above are imposed principally on the citizens of California—commercial fishermen, anglers, recreational enthusiasts, cities and farmers dependent on water diverted from the Delta and upstream rivers, the Hoopa Indians, and many others. Thus, while the primary beneficiaries of the CVP have been the recipients of the project water, virtually all of the costs associated with the project have been borne by the public. Under these circumstances, the costs of repairing the damage to the natural ecosystems and native economies caused by the project should be charged to the project's users, not the federal taxpayers.

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[2] 899 F.2d 799 (9th Cir.), *cert. denied*, 111 S. Ct. 567 (1990).

[3] California State Water Resources Control Board, Water Quality Control Plan For Salinity: San Francisco Bay/Sacramento-San Joaquin Delta Estuary 5-13 to 5-26 (1991).

[4] *Id.* at 5-20 to 5-27.

[5] *See* California Resources Agency & Department of the Interior, A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley: Final Report of the San Joaquin Valley Drainage Program 81-84 (1990).

[6] See *Peterson* v. *Department of the Interior*, 899 F. 2d 799, 804-06 (9th Cir. 1990).

2. Recognition of the Primacy of State Law

In *California* v. *United States*,[7] the Supreme Court held that California law generally governs the licensing and operation of the CVP, except where the application of state law would be contrary to an explicit congressional directive. In accordance with this ruling, the Bureau of Reclamation has abided by the terms and conditions of the water rights permits for the CVP established by the California State Water Resources Control Board and has participated before the Board in the on-going Bay-Delta hearings. Yet, on the subjects of water conservation and water transfers, the Bureau has not clearly articulated whether California law is applicable to the CVP and has followed informal policies that are inconsistent with state law. S. 484 would address both of these issues by authorizing CVP users voluntarily to conserve water and to transfer the conserved water to any use permitted by state law.

During the 1980s, the California Legislature enacted a series of laws designed to encourage the private reallocation of existing developed water supplies. The most important of these laws allow local water agencies and individual users voluntarily to conserve water, without risking loss of the underlying water right, and to transfer the "surplus" water made available by these efforts to other another user. These laws are essential to the development of a private market for water allocation for two reasons.

First, under California law (and the law of most western states), a water user's rights are limited to the amount of water "reasonably necessary" to supply the user's own beneficial needs. Thus, a user's ability to conserve water and generate a surplus would be evidence that the user's allocation was excessive and therefore should be reduced. The California statutes address this problem by declaring that the voluntary conservation of water "shall be deemed equivalent to a reasonable beneficial use of the water." [8]

Second, many irrigation districts and individual farmers do not have the capital needed to pay for water conservation efforts such as lined canals, new irrigation systems, or improved drainage facilities. Thus, without the ability to sell conserved water for a profit, they would not be financially able to increase the efficiency of their water use. California has responded to this dilemma by authorizing the transfer of water "the use of which has ceased or been reduced as a result of water conservation efforts." [9] Moreover, the Legislature has attempted to minimize the risk of forfeiture associated with conservation and transfer efforts by providing that "[t]he sale, lease, exchange, or transfer of water or water rights, in itself, shall not constitute evidence of waste or unreasonable use." [10]

Traditionally, the Bureau of Reclamation has not allowed its contractors to take advantage of these water transfer laws. During the 1980s, for example, the Bureau permitted extensive trading of project water to occur (CVP users transferred over 5.5 million acre feet), but placed a number of restrictions on these transactions. The most significant restrictions were:

1. Transfers were limited to one year or less.
2. The transferor could not earn a profit on the transaction, although the Bureau did permit the transferor to receive a reasonable "service charge."
3. The transferee must have a contract with the Bureau for a use of water authorized by the transferor's contract. In most cases, this prevented transfers from irrigation to municipal and industrial use.
4. No transfers were allowed between CVP Field Divisions, except between the Fresno and Tracy Divisions. This restriction effectively precluded transfers of project water across the Delta.[11]

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[7] 438 U.S. 635 (1978).

[8] California Water Code § 1011(a).

[9] *Id.* § 1011(b).

[10] *Id.* § 1244.

[11] *See* Gray, Water Transfers in California: 1981-1989, *supra* note 1, at 23-24.

Although the Bureau has begun recently to move toward a policy of allowing CVP users to conserve and transfer water, it has acted hesitantly and has looked to Congress for guidance on several important questions of federal law. These questions include:

1. Can individual users transfer project water on a long-term basis?
2. Should CVP users be able to retain rights to water that they do not need in a given year?
3. Can these users voluntarily reduce their demand for project water and transfer the surplus made available by these efforts?
4. Do the California conservation and transfer laws apply to the CVP?
5. May transferors of project water earn and retain a profit on the transaction?

S. 484 would address these questions by providing in section 5 that CVP contractors who renew or amend their contracts after the effective date of the Act may transfer the project water supplied to them "for project purposes or any purpose recognized as beneficial under applicable State law, regardless of price or duration." The bill thus incorporates California's beneficial use laws, including the provisions discussed above that define voluntary conservation and transfer as beneficial uses of water. The bill also authorizes long-term transfers and creates transferable entitlements equal to the average annual quantity of project water delivered to each CVP user from 1985 through 1989. This condition is consistent with current Bureau policy of allowing only transfers of water that the historically has been used and, if not for the agreement to transfer, would have been used by the transferor. This is an important limitation because it ensures that transfers reallocate the water that presently is used within the CVP system and do not increase aggregate demand on the project. Finally, the bill recognizes that profits are the catalyst of the system because they provide the necessary financial incentive for current CVP users to invest in water conservation and to pursue voluntary reallocation agreements with other water users around the state.

The approval of transfers of CVP water is limited only by the requirement that the transferor pay a 25 percent fee for fish and wildlife restoration, protection, and enhancement. This fee would be either 25 percent of the net proceeds from the transfer or 25 percent of the actual water transferred. Although California does not have a similar tax, this provision is modelled on Oregon's water transfer statutes, which exact a similar 25 percent fee for instream flow protection and aquatic habitat. A transfer tax is an especially important component of S. 484, however. For, without such a fee, transferors of CVP water would reap an enormous and unjustified windfall from the sale at market value of water provided to them by the United States taxpayers at a 90 percent subsidy. The tax also would provide a source of funding to pay for the habitat and flow restoration goals of the bill.

3. Senator Bradley's Questions

In his letter of May 10th, Senator Bradley posed five questions regarding potential amendments to S. 484. Before concluding, I would like to reply to four of these (leaving the fifth unanswered because of my inadequate knowledge of the Riparian Habitat Management Plan for the upper Sacramento River).

a. Should S. 484 be amended to authorize the Secretary of the Interior to increase the water supply of the Central Valley Project by making use of undeveloped groundwater, expanding conjunctive use of ground and surface supplies, participating in off-stream storage facilities such as the planned Los Banos Grandes project or purchasing water from private water right holders?

Yes. Increasing the dependable supply of the CVP through expanded surface storage, conjunctive use of groundwater basins, and acquisition of water by voluntary transfers would help to minimize the strains on the system and would enhance the Bureau's ability to implement the habitat and flow restoration policies of the bill. The strategies described in the question are all (relatively speaking, at least) environmentally benign means of accomplishing these goals.

b. Should S. 484 be amended to authorize the Central Valley Project to be operated for "any purpose recognized as beneficial under California law"?

Yes. Although federal law now permits the Bureau to deliver project water to off-stream wetlands and national wildlife refuges, the Bureau does not have clear authority to use project water for instream uses. In contrast, California law declares that "[t]he use of water for recreation and preservation and enhancement of fish and wildlife resources is a beneficial use of water." [12] Accordingly, by expressly incorporating the state definition of beneficial use as a project purpose, the bill would provide the Bureau with additional authority to fulfill the habitat and flow restoration policies of the legislation.

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[12] California Water Code § 1243.

c. Should S. 484 be amended to waive any Federal obligations to imposition of conditions by California on water rights held by the United States for the CVP, except conditions that would impair repayment of the CVP's debt to the Treasury? Under *California* v. *United States*,[13] the state now has broad authority to regulate the water rights and operations of the CVP, limited only by the Supreme Court's holding that the application of California law may not be inconsistent with an explicit congressional directive. This means that state law governs the project except in those rare instances where Congress has articulated a specific federal policy, such as the acreage limitations and preference for irrigation supply.[14] Although the proposed amendment probably would not alter this holding, I would be concerned that a broadly worded acquiescence to state water rights law could be interpreted to override the preemptive effect of a number of important federal laws, including the acreage limitations, the excess lands and pricing provisions of the Reclamation Reform Act, and the water conservation requirements of section 8(g) of S. 484 itself. In short, absent a compelling reason to change the law, I am satisfied that the balance between federal and state interests struck by the Supreme Court in *California* v. *United States* is the proper one.

d. Should S. 484 be amended to require substantial coordination between Federal permitting activities in the Central Valley, such as issuance of hydroelectric licenses under the Federal Power Act, or the dredge and fill permits under the Clean Water Act, and the fish and wildlife restoration programs called for by S. 484?

As a result of the Supreme Court's decision in *California* v. *Federal Energy Regulatory Commission*,[15] Federally licensed hydroelectric projects are exempt from state water law. Thus, as it did in the Rock Creek case that led to the Supreme Court's decision, the Federal Energy Regulatory Commission has the power to set lesser instream flow standards for private hydroelectric facilities than the State Water Resources Control Board determines are needed to protect instream beneficial uses under California law. This situation is paradoxical at best. For, in licensing private water users who are otherwise subject to state regulation, the Commission may ignore (and even frustrate) California's water resources policies. In contrast, in administering a federal reclamation project, the Bureau of Reclamation generally must defer to California law. The Rock Creek decision should be reversed. By doing so in S. 484, the Congress would further strengthen California's ability comprehensively to manage its water resources.

Senator **BRADLEY**. Thank you very much, Mr. Gray, for your specific suggestions.

Ms. Jean Auer.

STATEMENT OF JEAN E. AUER, VICE CHAIRMAN, SAN JOAQUIN VALLEY DRAINAGE OVERSIGHT COMMITTEE

Ms. **AUER**. Senator Bradley and Members of the subcommittee, I thought about transferring some of my time to Steve Hall today, but I do not have a surplus, so I think I will just maintain my full 5 minutes.

Thank you for inviting me to testify before you today. My name is Jean Auer and I am vice chair of the San Joaquin Valley Drainage Oversight Committee.

I am speaking today, however, as a private individual and a former public member of the State Water Resources Control Board. I have been asked to comment on drainage implications in S. 484.

Irrigation and drainage issues in the San Joaquin Valley and similar sites around the world focus not only on agriculture but also on environmental, water quality, and public health concerns.

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[13] 438 U.S. 635 (1978).

[14] See *Ivanhoe Irrigation District* v. *McCracken*, 357 U.S. 275 (1958); *City of Fresno* v. *California*, 372 U.S. 627 (1963).

[15] 110 S. Ct. 2024 (1990).

Irrigation in arid regions brings salinity problems that need special management.

California is now beset by adverse impacts from both drought and agricultural drainage. Although these problems appear to arise in contrasting conditions, water short as opposed to water logged, further inquiry shows that they both arise from the inadvisable use of old methods of management of water resources in new times, times characterized by drastically changed circumstances.

Essentially we are in trouble because we continue to cling to some 19th century management principles and practices that are sadly out of date and to images that are no longer valid. Our water infrastructure was not built for a drought of the magnitude of 1987 to 1991, and perhaps it never could have been.

Drainage problems were viewed as structurally solvable, until selenium toxicity was discovered at Kesterson. Suddenly we have run out of easy answers. And the old principles which have carried us this far really require adjustment.

The Bradley bill would begin to provide the stimulus and means to help the State of California establish a new way of managing that is appropriate to the needs of the time. Very importantly it would put teeth in the on-farm water conservation effort by requiring that water conservation practices be carried out and monitored on all lands served from a Federal project.

The provisions of the Federal act could bring Federal management up to par with the management by the State of California which has already an active and burgeoning water conservation program.

This bill also recognizes that society must meet the basic needs of fish and wildlife for a firm supply of clean water.

In the management plan for agricultural subsurface drainage and related problems on the west side of the San Joaquin Valley, which was the culmination of a 5-year Federal study of drainage problems in the State of California, it recommends a variety of actions to manage subsurface drainage and drainage-related problems.

Among these are source control, drainage reuse, land retirement, mentioned earlier, groundwater management, discharge to San Joaquin River controls, protection, restoration and provision of substitute water supplies for fish and wildlife habitat, and institutional change.

All of these would benefit from the passage of S. 484 and I go into some detail in my prepared remarks which I do not have time to give because of the number of people present.

There are some facets of the bill that I would like to see in more detail, or with increased emphasis as it relates to drainage. In particular, how local public water districts might obtain help in developing and testing and field sites; new technologies and practices to reduce drainage problems and increase water application efficiencies; how to provide an information clearinghouse for the millions of dollars of valuable information gathered in the San Joaquin Valley Drainage Program. It would be tragic if we did not further that effort to make sure that all of that important information is available for future people to study. And how to measure, monitor and calibrate the hydrological changes that are underway in California, particularly in the San Joaquin Valley.

I have also put in some remarks here about the proposed amendments that you sent out and one problem that I see in the first one you sent out was if we start developing groundwater sources and mine them in regular years, to go back to Senator Burns' question, then when we have a drought, that might be a stable water supply that would no longer be available. So I think you would have to look at that very carefully in relationship to a groundwater conjunctive use program, so you do not use up that emergency supply, so to speak.

I agree with the recommendation that you expressly permit California to impose whatever conditions it sees fit on water rights held by the Bureau for the Central Valley Project. There are those who would like to see the CVP under State authority, as you well know, and you have included a mechanism to evaluate that.

However, regardless of who is operating the Central Valley Project authority to require compliance with State law is critical.

I want to end by talking a little bit about third party impacts. I am Vice Mayor of the town and unfortunately this year Water Commissioner, in the fifth year of a drought situation in the Bay Area. We are presently under a mandatory 25-plus water rationing program and were threatened with a 45-percent mandatory cutback until the miracle March rains came.

Two nights ago, in a town of 11,000 people we had over 300 people come to hear how the town council was going to allocate this rationing program. And when we hold those hearings they are really representative of what is going on all over the State of California, and that is third-party impacts are already in place. They are affecting real estate values, they are affecting developers, they are affecting property owners, real estate agents, and so I guess what I am really trying to say is that people are worried about third-party impacts in the future, but what they sometimes fail to realize is that under the present system we are already subject to third-party impacts. The question therefore is what third-party impacts will be, not whether or not we will have them.

My view is that the biggest threat to agriculture right now is the status quo. Change is in the air and failing to resolve water quality issues in a timely manner will bring forces to bear that may indeed restrict agriculture far more than what is proposed in this legislation.

In fact, I firmly believe that well thought out plans which expand the CVP's mission will help to preclude decisions far less palatable, but nevertheless inevitable.

I hope we can go to wiser water management and not backward toward the West that was. I really support your bill and think it should be enacted, and thank you for your time.

[The prepared statement of Ms. Auer follows:]

PREPARED STATEMENT OF JEAN E. AUER, VICE CHAIRMAN, SAN JOAQUIN VALLEY DRAINAGE OVERSIGHT COMMITTEE

Senator Bradley and members of the subcommittee, thank you for inviting me to testify before you today. My name is Jean Auer, Vice-Chair of the San Joaquin Valley Drainage Oversight Committee. I am speaking as a private individual and former public member of the State Water Resouces Control Board. I have been asked to comment on drainage implications and S. 484.

Irrigation and drainage issues in the San Joaquin Valley and similar sites around the world focus not only on agriculture but also on environmental, water quality and public health concerns. Irrigation in arid regions brings salinity problems that need special management. In 1886 Hilgard warned that "the evils now besetting (California's Irrigation Districts) are already becoming painfully apparent, and to expect them not to increase unless the proper remedies are applied is to hope that natural laws will be waived in favor of California." Principles of soil and water management to deal with salinity were developed and applied, so that agricultural production could be maintained or enhanced. However, in the last two decades, the presumed and actual dominance of irrigation as the preferred use of water at the expense of other uses, was beginning to be questioned. These other uses, including instream uses, the public trust doctrine and municipal use gained in importance and caused a closer examination of water contracts, water quality regulations, subsidy programs and institutional changes. Public health and water quality became constraints in attempting to balance between agricultural lands productivity and fish and wildlife resources. Unless and until environmentally sound methods of maintaining salt balances over the long term are found, irrigated agriculture and environmental quality remain incompatible.

California is now beset by adverse impacts from drought and agricultural drainage. Although these problems appear to arise from contrasting conditions (water short as opposed to water logged), further inquiry shows that they both arise from the inadvisable use of old methods of management of water resources in new times—times characterized by drastically changed circumstances.

When the appropriative-rights water doctrine was set in place in California, you could count the residents in the thousands, and, the most pressing needs in water management were to divert streamflow for placer gold mining and for irrigating crops to feed the immigrants beginning to pour into the state. Most of our nineteenth century predecessors could not have foreseen a California in which the rivers do not run full with fish, or, do not run at all.

Now we are 30 million people, increasing by 700,000 every year. Perhaps the most diverse and productive ecosystems on the North American Continent are all but shut down. We have dammed many of our rivers and laced the land with giant canals—and still we are in trouble.

We are in trouble because we continue to cling to some nineteenth century management principles and practices that are sadly out of date, and to images that are no longer valid:

- that we can build our way out of all water problems with dams and ditches.
- that water for fish and wildlife is, somehow, not as important as water for agriculture or cities.
- that the primary focus of water management should be to put water on the land (things happen underground and in the streams, but we'll worry about that later).
- that Uncle Sam, and the California taxpayers will continue to subsidize water deliveries.

Our water infrastructure was not built for a drought of the magnitude of 1987-91. And perhaps it never could have been. Drainage problems were viewed as structurally solvable—until selenium toxicity was discovered at Kesterson. Suddenly we have run out of easy answers and the old principles, which have carried us this far, require adjustment.

The Bradley Bill would begin to provide the stimulus and means to help the State of California establish a new way of managing that is appropriate to the needs of the time. Very importantly, it would put teeth in the on-farm water conservation effort, by requiring that water conservation practices be carried out and monitored on all lands served from a Federal project.

Excess water applied to lands, i.e.—in excess of crop growth and soil leaching requirements, is the primary cause of the water logging and salinazation of thousands of acres of irrigated lands.

The provisions of the Federal act could bring Federal management up to par with management by the State of California which has an active and burgeoning water conservation program.

This bill also recognizes that society must meet the basic needs of fish and wildlife for a firm supply of clean water. Not a lavish supply, but a finite sum of water that is available from year to year—on a par at least with the security enjoyed by most agricultural users. Presently, fish and wildlife needs stand last in line. In fact, it was this inferior status which caused wildlife managers to accept (unknowingly) the selenium-poisoned drainage water that led to the Kesterson disaster.

The Bradley Bill would create a trust fund to raise the money to buy firm water supplies (quite minimal as compared to agricultural use) needed to halt the continuing extirpation of species, deterioration of habitat, and decline of populations of animals in California.

In the Preface of *A Management Plan for Agricultural Subsurface Drainage And Related Problems On The Westside San Joaquin Valley*, September 1990, a review of the history of the drainage problem suggests that some of the reasons the problem has grown to nearly five hundred thousand acres and is adversely affecting the environment include: (1) Continued hopes for a master drain, (2) expectations of a technological breakthrough in drainage water treatment, (3) the need for more information, and (4) a lack of cooperation among parties affected.

The plan recommends a variety of actions to manage subsurface drainage and drainage-related problems. Among them are:

(1) Source control. Consisting mainly of on-farm improvements in the application of irrigation water to reduce the source of deep percolation. This in turn will reduce the amount of drainage problem water.

(2) Drainage reuse. A planned system of drainage-water reuse on progressively more salt-tolerant plants. This will reduce the volume of drainage water and concentrate salts and trace elements for easier containment and safe disposal.

(3) Land retirement. Cessation of irrigation of areas in which underlying shallow ground water contains elevated levels of selenium and the soils are difficult to drain.

(4) Ground water management. Planned pumping from deep within the semiconfined aquifer, in places where near-surface water tables can be lowered and the water pumped is of suitable quality for irrigation or wildlife habitat.

(5) Discharge to the San Joaquin River. Control and limited discharge of drainage water from the San Joaquin Basin portion of the study area to the San Joaquin River while meeting water quality objectives.

(6) Protection, restoration, and provision of substitute water supplies for fish and wildlife habitat. Provision of freshwater supplies to substitute for drainage-contaminated water previously used on wetlands and to allow protection and restoration of contaminated fisheries and wetland habitat.

(7) Institutional change. Includes tiered water pricing, improved scheduling of water deliveries, water transfers and marketing, and formation of regional drainage management organizations to aid in implementing other plan components.

All of these would benefit from passage of S. 484. Section 5 in particular deals with conservation and improved water management, including meters for groundwater pumps and surface delivery systems. It also assures that surface and subsurface agricultural drainage meet state and federal water quality standards. Section 8(g) requires an office on Central Valley Project water conservation to develop standards for evaluating the adequacy of all water conservation plans developed by project contractors.

There are other provisions in the proposed legislation that could be beneficial to assist the Federal government in California in modernizing its water management practices, and there are some facets of the bill that I would like to see in more detail, or with increased emphasis, especially:

How local public water districts might obtain help in developing and testing, in field sites, new technologies and practices to reduce drainage problems and increase water application efficiencies.

How to provide an information clearing-house for the millions of dollars of valuable information gathered in the San Joaquin Valley Drainage Program.

How to measure, monitor and calibrate the hydrological changes that are underway in California, as we move toward a population of 40 million people and as our bountiful land becomes increasingly important to these people as well as to the nation.

Questions regarding possible amendments to S. 484:

(1) Should S. 484 be amended to authorize the Secretary of Interior to increase the water supply of the Central Valley Project by making use of undeveloped groundwater, expanding conjunctive use of ground and surface supplies, participating in off-stream storage facilities such as the planned Los Banos Grandes project, or purchasing water from private water right holders?

(2) Should S. 484 be amended to authorize the Central Valley Project to be operated for "any purpose recognized as beneficial under California law"?

(3) Should S. 484 be amended to waive any Federal objections to imposition of conditions by California on water rights held by the United States for the Central Valley Project, except conditions that would impair repayment of the Central Valley project's debt to the Treasury?

(4) Should S. 484 be amended to require substantial coordination between Federal permitting activities in the Central Valley, such as the issuance of hydroelectric licenses under the Federal Power Act, or dredge and fill permits under the Clean Water Act, and the fish and wildlife restoration programs called for by S. 484?

(5) Should S. 484 be amended to authorize implementation of the Upper Sacramento (River Fisheries and Riparian Habitat Management Plan?

In answer to the five possible amendments to S. 484, the answer in every case is yes. However, I have some questions about some portions of several proposed amendments. In the first one, there is concern about using undeveloped ground water to increase the water supply because when a drought occurs (something we are all very familiar with in California) that alternative water supply has already been committed. Also, off-stream storage facilities, south of the Delta, are generally supported, subject, of course, to the Environmental Impact Statement/Environmental Impact Report process and any other review procedures in place.

I agree with the recommendation that you expressly permit California to impose whatever conditions its sees fit on water rights held by the Bureau for the Central Valley Project. There are those who would like to see the Central Valley Project under state authority, as you well know, and you have included a mechanism to evaluate that. However, regardless of who is operating the Central Valley Project, authority to require compliance with state law is critical.

Third party impacts are inevitable when water is reallocated. In the town where I am Vice-Mayor (and Water Commissioner) we are under mandatory twenty-five percent plus water rationing again and were threatened with forty-five percent mandatory cutbacks until the miracle March rains came. When we hold hearings (the fourth was earlier this week) to determine how to allocate this reduction, they reflect the conflicts elsewhere in the state—developers, landscapers, pool builders, gardeners, real estate brokers and property owners are all affected by how much water is available. More importantly, every area of California claims third party impacts because, in fact, they exist in water-short years: People are worried about third party impacts in the future. What they sometimes fail to realize is that, under the present system, we are already subject to third party impacts. The question therefore is what the third party impacts will be, not whether or not we will have them. Farmers are afraid that urban and environmental forces will join forces and "take" their water, urban folks are frustrated with water shortages, and environmentalists continue to view with dismay the loss of habitat and decline in quality.

Around 140 A.D. in Rome the first major recorded water "conflict" took place over interbasin transfers when the Roman senate, after heated argument, finally approved thirty-five million dollars (1984 dollars) for the construction of the first of their series of aqueducts. Interestingly enough, it was necessary for one to have been a successful general in battle as a prerequisite for being the water commissioner of Rome. Fortunately, the prerequisite now is to develop a fair and equitable allocation of water based on current needs.

Now we have saturated ground water basins, water shortages, violations of migratory bird treaty acts etc, making the biggest economic threat to agriculture the status quo. Change is in the air. Failure to resolve water quality issues in a timely manner will bring forces to bear that may indeed restrict agriculture far more than what is proposed in this legislation. In fact, I firmly believe that well thought out plans which expand the Central Valley Project's mission will help to preclude decisions far less palatable but nevertheless inevitable.

In summary, this is a progressive bill whose time has come. I hope that the essential thrust of the bill is retained and that the Congress will look ahead toward wiser management of water, and not backward, toward a "West that Was". It should be enacted.

Senator **Bradley**. Thank you very much, Ms. Auer.

Karen Garrison.

STATEMENT OF KAREN GARRISON, SENIOR PROJECT SCIENTIST, NATURAL RESOURCES DEFENSE COUNCIL, SAN FRANCISCO, CA

Ms. **Garrison**. Good morning and thank you for the invitation to speak here today. This is a historic occasion. It is probably the first time women were equally represented on a panel on California water. Thank you.

[Laughter.]

Ms. **Garrison**. Maybe next time you are here we can have some——

Senator **Bradley**. We just went where the talent was.

Ms. **Garrison**. We like that approach. My name is Karen Garrison and I represent the Natural Resources Defense Council. NRDC is a national nonprofit, environmental organization with over 170,000 members nationwide.

Since the last time we spoke before you, Mr. Chairman, 2 more years of drought under current policies have reduced fish populations to historic lows, and pushed additional species toward extinction, further dramatizing the need for thorough reform of the management of the Central Valley Project.

We believe S. 484 provides that much needed change in the management of the CVP through a balanced but vigorous program of reforms. The bill addresses many of the underlying institutional causes of the deterioration of fish and wildlife in the State, and would ensure that the Federal Government assists not subverts the State in managing its resources efficiently.

My written testimony covers in much greater detail the environmental degradation. I will not go into that, or the causes of that degradation, heavily subsidized water, inflexible allocations, and the low priority on fish and wildlife purposes.

Instead of going into that I am just going to skip straight to a further discussion of the San Joaquin Valley drainage program plan, since that issue really gets to some of the bread-and-butter issues and particularly addresses some of the issues you raised, Mr. Seymour.

For those who have expressed concern about possible adverse impacts of S. 484 on farm economy, it is very useful to examine the future for the farming industry in the absence of a program like that offered by S. 484 and put some numbers on the concepts that you mentioned, Senator Bradley.

The drainage program looked at impacts of the continuation of current trends in the drainage problem area, which consists of farms on the west side of the San Joaquin Valley.

It found the areas suitable for farming would shrink as water logging increased and shallow groundwater tables spread. Rising soil and groundwater salinity would also force farmers to abandon production on some lands.

The final report of the drainage program predicts that economic losses would amount to over $600 million per year, 9,196 jobs would be lost, and over 0.5 million acres of land would be forced out of production. That is a lot of land.

These losses can be avoided. The drainage program recommends a plan for doing so at a cost of about $42 million per year; that is 7 percent of the cost of doing nothing.

As Jean mentioned, the drainage program does implement many of the components of the drainage program and I think it is important to recognize that the drainage program is one of the best and most recent examples of a plan developed cooperatively with extensive public input, oversight by a citizens advisory committee, and thorough review by experts. The Bureau of Reclamation and the California Department of Water Resources formally endorsed the final plan.

As the plan notes, many of the Valley's water and drainage districts and individual growers have already begun to take action similar to those recommended in this report. But the program did not take the final step and include an implementation program. S. 484 does so by encouraging improved water management, conservation, drainage control, and linking those improvements to contract renewals.

Concern about whether the requirements of S. 484 will disrupt the farming industry and focused on a contract renewal provisions of the bill. A discussion of source control objectives of the drainage program illustrate that the bill's requirements are in fact reasonable and fully compatible with the broadly approved drainage program plan.

Source control in this context consists primarily of improved management of and reductions in the application of irrigation water to reduce the source of deep percolation of groundwater.

The drainage program established targets for reductions in deep percolation which translate into reductions in applied water. For a district that receives the average allocation in the drainage program area, applied water would have to be reduced by about 16 percent to reach this target.

In short, if the average district in the drainage problem area reduces its water applications by the amount called for under the drainage program plan, it will have achieved the 16-percent reduction that is required to meet the conservation target for a 16-year contract renewal under the provisions of S. 484.

Those requirements have been characterized as extortion by some today. I would submit that they instead provide a means of relief from very odious impacts that will happen without their implementation.

I want to go straight now to——

Senator **Bradley**. Would you—could take a minute to wrap up?

Ms. **Garrison**. A minute on your questions. No. 1, we believe the idea of increasing the water supply for the purposes of this bill offers promise but we want to mention a few concerns and conditions.

Certainly all those efforts would have to comply with NEPA and other environmental laws. We share Jean Auer's concerns that tapping undeveloped groundwater should be considered carefully in light of the current potential of this groundwater to provide backup supplies in times of extended drought for fish and wildlife.

It is also important to undertake conjunctive use efforts in the context of a groundwater management, trying to avoid overdraft and unanticipated impacts.

In the case of off-stream storage, if the project is an environmentally sound one and complies with environmental laws, we would support Federal involvement to further the fish and wildlife purposes of this act, and we certainly support the acquisition of water through voluntary transfers consistent with State law.

The one other thing I want to comment on is your third question. You asked whether there should be a further waiver of objections to conditions imposed by the CVP by the State. Here we submit that S. 484 as drafted already clarifies the State law based conditions requiring fish flow releases and other habitat improvements are consistent with the CVP's authorized purposes to provide for fish and wildlife restoration.

Given the particular focus of this bill it is not clear how subordinating these now strengthened Federal purposes to future conditions the State might impose, further fish and wildlife protection, Federal law already requires considerable deference by the Bureau to State water law as the Interior Department frequently points out. Therefore we believe the bill does not need further amendments on this issue.

And I have in my written statement comments on the other points.

[The prepared statement of Ms. Garrison follows:]

PREPARED STATEMENT OF KAREN GARRISON, SENIOR PROJECT SCIENTIST, NATURAL RESOURCES DEFENSE COUNCIL, SAN FRANCISCO, CA

Good morning, and thank you for the invitation to speak here today. My name is Karen Garrison and I am a senior project scientist in the San Francisco office of the Natural Resources Defense Council (NRDC). NRDC is a national non-profit environmental organization with over 170,000 members nationwide, committed to protecting the country's natural resources. To that end, we promote the conservation and rational use of western water resources, and in particular, have spent many years addressing the environmental problems caused by the federal role in water management in California.

Mr. Chairman, when we testified before you two years ago, you were gathering ideas about how to ensure that the federal government assists, not subverts, the state in managing its water supply efficiently. Since then, two more years of drought under current policies have reduced fish populations to historic lows and pushed additional species toward extinction, further dramatizing the need for thorough-going reform of the management of the Central Valley Project (CVP).

We believe S. 484, the Central Valley Project Improvement Act, provides that much needed change in management through a balanced but vigorous program of reforms. The bill addresses many of the underlying institutional and economic causes of the deterioration of vital fish and wildlife resources in California. The solutions provided by the bill could reverse this degradation, avert protracted litigation, and minimize the agricultural losses that will undoubtedly occur if current outdated policies continue to prevail. We commend you, Mr. Chairman, and Senator Cranston for taking this bold step, and offer our enthusiastic support.

It is no secret that California has changed dramatically since the days when federal water management policies first took shape early in this century. Those policies reflected a determination to wrest every available drop from the rivers for consumptive use, in order to promote the settlement of the West. Little thought was given to protecting the long-term viability of water resources or the then-abundant populations of fish and wildlife. The American Fisheries Society, an organization of professional fisheries biologists, recently described the condition of California's fisheries, in large part a result of these policies, as follows:

> The aquatic resources of California are facing a crisis of survival. Fully 65% of the fish species native to the state are extinct, endangered, or in need of special protection to prevent them from becoming endangered. In particularly bad shape are populations of anadromous (sea-run) fishes, which have high economic, aesthetic, genetic, and ecological values. Anadromous fishes in serious trouble in California include spring-run chinook salmon, coho salmon, pink salmon, chum salmon, summer steelhead, southern steelhead, coastal cutthroat trout, green sturgeon, delta smelt, longfin smelt, and eulachon. In fact, all anadromous fish in California are in severe decline, including fall-run chinook and winter steelhead, mainstays of sport and commercial fisheries. All these species have their southernmost (or only) populations in California, so represent a na-

tional treasury of genetic resources that will become increasingly valuable as global warming occurs and more northern rivers become warmer.[1]

Wetlands face a dual threat—loss of their historic water supplies and contamination by toxic agricultural drainwater. The remaining wetlands in the Central Valley represent just over 5% of the original extent of this rich habitat. Over the past fifteen years alone, wintering waterfowl populations dropped from 10 million birds to 3.5 million birds. Even after enormous and alarming reductions, California is still one of the most important waterfowl habitats in the world, supporting 60% of all waterfowl using the Pacific Flyway and 20% of those in North America.

In addition to shrinking fish and wildlife populations, California must contend with insufficient supplies to serve projected urban growth of unprecedented levels, persistent water quality problems caused by agricultural discharges, and the destruction of valuable farmland from the application of too much water. These problems have a common source. The time to change federal water policies to match today's realities is long overdue.

At the root of these problems is a federal allocation system that rewards inefficiency and thwarts flexibility. As long as the CVP provides water for $1.75 to $15.00 per acre foot (an amount that costs urban users $150 to over $300), growers have little incentive to conserve. Congress intended to restrict those subsidies to farms of 960 acres or less through the Reclamation Reform Act in 1982, but abuses of that law continue. Although outside the scope of this bill, the effort to close the remaining loopholes in the implementation of the acreage limitation remains extremely important. We urge your continued support, Mr. Chairman and other members of the committee, for that crucial effort.

Forty years ago, the Bureau based its water allocations on the water requirements of flood irrigation—a technique considered extremely wasteful today. Despite dramatic improvements in the efficiency of available irrigation systems, CVP contracts provide the same quantity of water today that they provided 4 decades ago, and the Bureau has so far refused to consider alternatives to automatic renewal of these allocations when contracts expire. Furthermore, the Bureau further compounds the problems created by its approach to contracting by imposing burdensome restrictions on transfers. Under current regional Bureau policies, growers who wish to finance conservation improvements by selling saved water at a profit can be prevented from doing so, even in the absence of third party impacts.

Another root cause of environmental degradation, in addition to low prices and inflexible allocations, is the Bureau's historic relegation of fish and wildlife to the bottom of its priority list in every day operational decisions, and continued failure to mitigate the damages caused by CVP facilities and operations.

The appropriation doctrine that governs water law in most western states also discourages efficient use and environmental protection, but California has a number of laws designed to correct these problems, including a law that recognizes that transfer of conserved water is not an unreasonable use, laws that require flow releases to support fisheries below dams, and a law that calls for a doubling of the state's salmon and steelhead populations by the year 2000. Unfortunately, current federal policies have hindered full compliance by the CVP and its contractors with these laws.

In theory, the Bureau supports environmental management and efficient use, as its adoption of a new mission in 1987 was supposed to indicate. But as long as the agency's most influential practices—subsidies, inflexible water allocations, and the relegation of fish and wildlife to lowest priority—do not change, any commitment to a new mission remains little more than lip service. S. 484 would allow the Bureau to realize its new mission by addressing these problematic practices and moving forward with more transfers, stronger conservation requirements, and a meaningful restoration program.

We have already talked about the environmental degradation that makes S. 484 a necessity. The bill would also provide a means of implementing many of the key components of the interagency San Joaquin Valley Drainage Program Plan, complete with a financing mechanism. For those who have expressed concern about possible adverse impacts of S. 484 on the farm economy, it is instructive to examine the future for the farming industry in the absence of a program like that offered by S. 484.

The Drainage Program looked at impacts of a continuation of current trends in the "drainage problem area," which consists of farms on the west side of the San

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[1] Moyle, Peter B. and Michael D. Morford. Salmon, Steelhead, Smelt, and Sturgeon in California: Endangered Resources, American Fisheries Society, et al, January, 1991.

Joaquin Valley. It found that the area suitable for farming would shrink as waterlogging increased and shallow groundwater tables spread. Groundwater within the crop root zones would become more saline, restricting its ability to support crops. Rising soil salinity would also force farmers to abandon production on some lands. The final report of the Drainage Program predicts the following losses by the year 2040:

Reduction in irrig. crop area: 550,000 acres
Lost crop value, per year: $441,255,000
Retail sales losses (including lost crop value), per year: $63,222,000
Total income losses, per year: $123,297,000
Total employment loss (pers-yrs): 9,196

In short, economic losses would amount to over $600 million per year, and over half a million acres of land would be forced out of production. In comparison, the recommended plan for avoiding these impacts would cost only $42 million per year.

The primary purpose of the Drainage Program was to develop a workable plan to control drainage and prevent such losses. This program is one of the best and most recent examples of a Plan developed cooperatively, with extensive public input, oversight by a citizens' advisory committee, and thorough review by experts. The Bureau of Reclamation and the California Department of Water Resources formally endorsed the final Plan. As the Plan notes, "many of the valley's water and drainage districts and individual growers have already begun to take actions similar to those recommended in this report."[2] S. 484 implements the main components of the final Plan by linking improved water management, conservation and drainage control to contract renewals.

Concern about whether the requirements of S. 484 will disrupt the farming industry have focused on the contract renewal provisions of the bill. A discussion of the source control objectives of the drainage program illustrates that the bill's requirements are reasonable and fully compatible with the broadly approved Drainage Program plan.

Source control in this context consists primarily of improved management of and reductions in the application of irrigation water to reduce the source of deep percolation to groundwater. In fact, reductions needed in deep percolation translate directly into reductions in applied water. In all but one of the 5 regions comprising the drainage problem area, the target reduction in deep percolation is 0.35 acre feet per acre per year. For an irrigation district with the typical surface water allotment of 2.2 acre feet per acre per year, applied water would have to be reduced by about 16% to reach this target. In short, if an average district in the drainage problem area reduces its water applications by the amount called for under the Drainage Program Plan, it would have reduced its applied water by about 16%, meeting the conservation target for a 16 year contract renewal under the provisions of S. 484. Although not addressed by the drainage program report, reductions in surface water applications are often equally necessary outside the drainage problem area, where contamination by pesticides and fertilizers poses a major threat to the quality of groundwater on which these districts depend for part of their supply.

We would like to recommend a few changes to the bill.

1. We strongly support the bill's objective of maintaining the biological diversity of the Central Valley. To guard against an overly narrow interpretation of that concept, we propose a change in Section 7 and a definition of "biological diversity," along the lines of the following:

> Sec. 7(e)(3)(A) "... projects that protect or restore the native biological diversity of the Central Valley" in replacement for "projects that identify, protect or restore the best examples of the Central Valley's biological diversity".
>
> Sec. 3(g) the term biological diversity means the overall richness of life forms in a given area, including the number, abundance, and distribution of species and their local populations, the variability of individual within species or populations, and the variety of ecological communities and processes in and by which they are sustained; native biological diversity refers to biological diversity as it exists or existed reasonably free from the effects of human-generated disturbance.

2. In keeping with the goals of conforming S. 484 with California law, we propose to add the following to Section 6(c), after "general public ... ":

> "... and in accordance with the provisions of pertinent California statutes, including the Salmon, Steelhead and Anadromous Fisheries Program Act of 1988 (Chapter 1545 of the California Statutes of 1988), ... "

We would also like to comment briefly on some of the questions you have raised, Mr. Chairman, concerning possible amendments to S. 484.

1. While we can imagine conditions under which it would be beneficial for the Secretary of Interior to increase the water supply of the CVP for purposes of S. 484, we have specific concerns about the proposals in question 1. Further thought needs to be given to appropriate ways to condition such efforts. All such efforts would have to comply with NEPA, the Endangered Species Act, and other environmental laws as appropriate. The tapping of undeveloped groundwater should be considered carefully in light of the current potential for such groundwater to provide back-up supplies for fish and wildlife during times of extended drought. If this groundwater were developed as a normal year supply, the resiliency of the system during drought could be diminished. It would also be important to undertake such development within the context of a groundwater management plan to avoid overdraft and unanticipated impacts. In the case of off-stream storage, if the project is an environmentally sound project and complies with all environmental laws, we would support federal involvement as necessary to further the fish and wildlife purposes of this act.

2. Your second question asks whether Congress should authorize the CVP to be operated for any purpose recognized as beneficial under California law. We would respond that the first priority in this legislation should be to establish as a matter of federal law that the Secretary should operate the CVP so as to provide equitable treatment for fish, wildlife, and related habitat with the other primary purposes of the CVP and that, in particular, the Secretary should protect, restore and enhance fish, wildlife, and related habitat affected by the project. S. 484 currently does this. Whether or not Congress wants to add on all of the other beneficial uses recognized in California is a separate matter that raises issues beyond the fish and wildlife focus of this bill. We would submit that the bill as drafted accomplishes the key goal of clarifying the project's fish and wildlife purposes and we would not at this point urge any further changes in that section.

3. You also asked whether there should be a further waiver of objections to conditions imposed on the CVP by the state. Here again, we would submit that S. 484 as drafted already clarifies that state law-based conditions requiring fish flow releases and other habitat improvements are consistent with the CVP's authorized purposes to provide for fish and wildlife restoration and enhancement. Given the particular focus of this bill, it is not clear how subordinating these now-strengthened federal purposes to future conditions that the state might impose furthers fish and wildlife protection. Federal law already requires considerable deference by the Bureau to state water law, as the Interior Department frequently points out. Therefore, we believe the bill does not need further amendment on this issue.

4. Finally, you have asked about incorporating the Upper Sacramento River Management Plan into S. 484. Fishery managers have known for years of the need for most of the measures included in the Upper Sacramento River Management Plan. However, some of those measures were developed before the passage of the Salmon, Steelhead and Anadromous Fish Program Act of 1988, which emphasizes the importance of natural production in the restoration of anadromous fisheries. For instance, the package includes proposals such as a $25 million fish hatchery. Before integrating any parts of this plan into S. 484, each measure should be examined for consistency with state laws governing fishery restoration.

In conclusion, efforts to restore environmental damages and improve water management at the state level depend on removing obstacles to federal participation and authorizing federal restoration efforts. S. 484 begins to create a level playing field that could allow a fully cooperative relationship between state and federal efforts. NRDC enthusiastically welcomes the bill as much needed relief from the historical imbalance in the policies that have governed CVP operations.

Senator **Bradley**. Thank you very much, Ms. Garrison. Martha Davis.

STATEMENT OF MARTHA DAVIS, EXECUTIVE DIRECTOR, MONO LAKE COMMITTEE, BURBANK, CA

Ms. **Davis**. Good morning, Mr. Chairman, Senator Seymour, Senator Burns. Thank you very much for inviting me to testify this morning.

Frankly, a good portion of my comments have already been made by Senator Roberti and Assemblyman Isenberg, so I will cut my comments as short as I can.

Can S. 484 play a role in providing Federal assistance to California in resolving Mono Lake litigation and controversy. You have heard the answers very clearly. Yes, not only can this bill play a pivotal role in protecting Mono Lake, but also assist in assuring that the environmental problem at Mono Lake is not transferred to another ecosystem or region in the State of California and in contributing to the resolution of pressing environmental problems in the Central Valley.

As Senator Roberti and Assemblyman Isenberg stated, there is an opportunity to link efforts to address drainage problems in the Central Valley with protection of Mono Lake using the $60 million State environmental water plan.

Mr. Chairman, as you are aware an innovative proposal has been put forward within the last month by the State Lands Commission and has been endorsed by the Mono Lake Committee and the Los Angeles Department of Water and Power.

The concept is a simple one. Secure the water needed to replace the Los Angeles water diversions and protect Mono Lake through voluntary retirement of lands in the Central Valley suffering from serious drainage and selenium contamination problems.

Under this proposal a portion of the freed-up water would remain in the Central Valley for irrigation of lands which do not contribute to drainage problems.

A portion of the water would remain in the Central Valley for fish and wildlife benefits consistent with your legislation.

And a portion of the water would be transferred to Los Angeles for the protection of Mono Lake.

Mr. Chairman, the potential benefits from the implementation of this proposal are impressive. It would settle a longstanding dispute and protect Mono Lake without detrimental effects on public trust resources such as the San Francisco Bay, Delta. It would satisfy the needs of Los Angeles for water, to replace that formerly diverted from the Mono Basin.

It would reduce toxic drainage in the Central Valley enhancing the long-term viability of agriculture as well as limiting the impacts of such drainage on wildlife. It would provide additional water for agricultural lands in the Central Valley which do not contribute to the drainage problems.

It would provide additional water for fish and wildlife benefits to the Central Valley and San Francisco Bay, Delta, and it would establish a cooperative effort in which State and Federal agencies, public and private organizations, and northern and southern regions of the State can work together in solving California's pressing environmental and water problems.

Many details remain to be worked out before the State Lands Commission proposal can be implemented. We encourage and support today. Thank you very much for your letter we received several weeks ago on this.

I would like to close simply by saying that S. 484 is critical to the implementation of the proposal by the State Lands Commission.

With respect to amendments, I would like to suggest two points. One is to facilitate the proposal by the State Lands Commission you may want to consider language which focuses exclusively on the drainage lands in the Central Valley to allow transfers under the existing contracts as well as new ones.

I suggest that such a provision be permitted only upon findings that the land from which the water would be transferred suffers from serious drainage problems and have concerned the contractors.

Second, I would simply like to add a comment in my support for area of origin protections be included in this bill suggested by Senator Seymour and Assemblyman Isenberg. A lot of the efforts were going to—to clean up those problems.

So I do not have specific language for you, I would be pleased to work with you on that.

We are just very sensitive to those problems.

Thank you very much. I would be pleased to answer any questions.

[The prepared statement of Ms. Davis follows:]

PREPARED STATEMENT OF MARTHA DAVIS, EXECUTIVE DIRECTOR, MONO LAKE COMMITTEE, BURBANK, CA

Senator Bradley and members of the subcommittee, thank you for extending me an invitation to testify before you today. I am Martha Davis, Executive Director for the Mono Lake Committee. The Committee is a 21,000 member citizen's group which is dedicated to the preservation of Mono Lake in California.

Mr. Chairman, you have called this hearing to discuss amendments to S. 484, the proposed Central Valley Project Improvement Act, which you are co-sponsoring with Senator Cranston. This bill would permit voluntary transfers of Central Valley Project water, subject to California law. In particular, you have asked me to address how S. 484, if passed, could provide California with Federal assistance in resolving the longstanding Mono Lake litigation and controversy.

The Mono Lake Committee commends you for your leadership in introducing S. 484. Federal recognition of the extensive harm to the Central Valley environment caused by the construction and operation of the Central Valley Project is long overdue. The Committee concurs with your assessment that this Project must be held—at a minimum—to the same standards of "environmental accountability" as the State's own water projects. Further, more must be done than just stopping new environmental harm from occurring. We applaud your commitment to repairing the damage to Central Valley fish and wildlife resources.

As you are aware, the Central Valley is not the only area of California where the environment has been devastated by water gathering operations. To the east of the Sierra Nevada, Mono Lake and the Owens Valley have also been brought to the edge of ecological collapse as the result of the construction and operation of the Los Angeles Aqueduct. In 50 years of diversions the water level of Mono Lake has fallen more than 40 vertical feet. While California courts have taken important steps to halt additional harm from occurring at Mono Lake, much remains to be done to repair past damage and restore the Mono Lake ecosystem as well as to protect the Congressionally-established Mono Basin National Forest Scenic Area.

The Mono Lake Committee has long recognized that an environmentally responsible solution to the Mono Lake controversy requires more than a protection plan for Mono Lake. It is essential that the problem not be transferred to another region of the State. For this reason, the Mono Lake Committee accepted the additional responsibility of seeking new sources of water replacing Los Angeles' diversions which do not create environmental problems in the San Francisco Bay-Delta or elsewhere.

In April, the Mono Lake Committee presented a SIX-POINT PLAN which provides the basis for an environmentally sound solution. This plan will accomplish the following:

- Restore and preserve Mono Lake's public trust and scenic values by maintaining Mono Lake at a management level of 6386 feet above sea level;
- Restore and preserve Mono Basin streams and fisheries;
- Allow Los Angeles to continue diverting water from the Mono Basin subject to protections for Mono Lake;
- Secure new reliable water supplies for Los Angeles to replace the water needed to protect Mono Lake;

- Provide drought year protection to Los Angeles and the eastern Sierra; and
- Permit modest water diversions during the first five years that replacement water supplies are being developed.

A key element of this plan is the use of the $60 million Environmental Water Fund established by the California Legislature in 1989 to implement the water conservation, wastewater reclamation and water marketing projects which will yield the new water needed to replace Los Angeles' Mono diversions.

Last month, an innovative and far-reaching plan for solving the Mono Lake controversy through water marketing was proposed by the State Lands Commission under the leadership of Lieutenant Governor Leo T. McCarthy and the Commission's Executive Officer Charles Warren. Endorsed by the Mono Lake Committee and the Los Angeles Department of Water and Power, this plan would secure replacement water for Los Angeles and Mono Lake through the voluntary retirement of lands in the San Joaquin Valley having shallow water tables and soils containing high levels of selenium and other toxics. A portion of the irrigation water would be left in the area for irrigation of agricultural lands which do not contribute to drainage problems. A portion of the water would be left in the area for fish and wildlife benefits, consistent with the provisions of S. 484. And a portion of the water would be transferred to Los Angeles to replace Los Angeles diversions and to protect Mono Lake.

This proposal has been described as a "win-win" plan for the State, Mono Lake, Los Angeles, Agriculture, and all the citizens of California. The array of potential benefits from the implementation of this proposal are impressive:

- Settle a long-standing dispute and permanently protect Mono Lake, without detrimental effects on other public trust resources such as the San Francisco Bay-Delta;
- Satisfy the needs of Los Angeles for water to replace that formerly diverted from the Mono Basin;
- Reduce toxic drainage in the Central Valley, enhancing the long term viability of agriculture as well as limiting the impacts of such drainage on wildlife;
- Provide additional water for agricultural lands in the Central Valley which do not contribute to the drainage problems;
- Provide additional water for fish and wildlife benefits in the Central Valley and San Francisco Bay-Delta; and
- Establish a cooperative effort in which State and Federal agencies, public and private organizations, and the northern and southern regions of the State can participate in solving California's pressing environmental and water problems.

Many details remained to be worked out before the State Lands Commission proposal can be implemented, including Los Angeles' agreement to the protection plan for Mono Lake. However we are encouraged by the support that the Commission's proposal has received to date. The plan is now being evaluated by Governor Wilson's Administration. Mr. Chairman, we particularly appreciate your recent letter endorsing the Commissions approach to resolving the Mono Lake controversy.

However, this proposal can only be implemented if S. 484 is approved by Congress and signed into law by President Bush. The service district of the Central Valley Project must be expanded for CVP water to be transferred to Los Angeles. S. 484 addresses this point be broadening the authorization of the Central Valley Project to include fish and wildlife benefits and eliminating Federally imposed obstacles to the transfer of water within the Central Valley or elsewhere in the State.

Mr. Chairman, your bill addresses transfer of water under new contracts. However, with respect to lands which suffer serious drainage problems, you may want to consider adding language which would permit water transfers outside the district area under existing contracts. This type of transfer could be expressly limited to circumstances where findings have been made that the lands have serious drainage problems and existing contractors consent to the transfer.

The Mono Lake Committee supports S. 484 because it provides critically needed flexibility in the operation of the Central Valley Project to meet the real water needs of State. Indeed water marketing, as outlined in the State Lands Commission proposal, will not only help solve the pressing problem at Mono Lake, but it will go a long ways to help resolve other water and environmental problems acing California.

Thank you again for inviting me to testify. We look forward to working with you and the Committee staff on S. 484 as this legislation is considered by Congress. I would be pleased to answer any questions you may have.

[Attachment.]

A Six-Point Plan To Preserve Mono Lake, Secure Replacement Water for Los Angeles and Resolve a 50-Year-Long Dispute

The Mono Lake Committee and the National Audubon Society propose a six-point plan to restore and permanently protect the public trust and scenic values of Mono Lake and to provide Los Angeles with a reliable and environmentally sound water supply replacing diversions from the Mono Basin.

Under the proposed plan, Mono Lake will be stabilized at an elevation of 6386 feet within fifteen years. This prudent management level will preserve the wildlife and scenic values of Mono's million-year-old ecosystem. This management elevation, however, is more than 30 vertical feet below the lake's natural water level before Los Angeles began to divert Mono's streams.

Under the proposed plan, Los Angeles can continue to divert water from the Mono Basin, subject to certain conditions. These conditions will provide sufficient water to protect Mono Lake's public trust and scenic values, preserve the integrity of the Congressionally-established Mono Basin National Forest Scenic Area and restore wild trout fisheries and stream ecosystems.

Replacement water for Los Angeles will be obtained by using the $60 million Environmental Water Fund created by the California State Legislature specifically for this purpose. Fund money will be used to implement water conservation, wastewater recycling and water marketing projects—generating a new, reliable water supply of more than 70,000 acre-feet annually. The proposed plan protects important natural resources in the state without endangering other ecosystems.

Recognizing the time required to bring new projects on line, the plan permits Los Angeles to divert a limited amount of water from the Mono Basin for the first five years that replacement water projects are under construction. The plan also provides Los Angeles with drought-year protection.

By proposing a solution that contains the following six elements, the Mono Lake Committee and the National Audubon Society commit themselves to resolving the Mono Lake controversy in a manner that meets the needs of both Los Angeles and Mono Lake.

The following six points—three addressing Mono Lake's needs and three addressing Los Angeles' needs—are the basis for a lasting resolution of the Mono Lake controversy.

MONO LAKE'S NEEDS

1. Management Lake Level, 6386 feet. Restore and preserve Mono Lake's public trust and scenic values by maintaining the lake at a management level of 6386 feet above sea level.

The 6386-foot management level protects most of Mono Lake's ecological resources and wildlife populations restores substantially its scenic grandeur and greatly reduces the health risk from hazardous alkali dust blowing off the lake's exposed shoreline.

The 6386 lake elevation also provides a prudent nine-foot buffer against dramatic declines in the water level resulting from droughts or dry-year diversions by Los Angeles.

When Mono Lake is above 6386 feet the City could maximize its Mono water diversions, releasing to the streams only the minimum flows required by court order. Below 6386 feet Los Angeles could divert water only in dry years.

At the 6386 management level, Mono Lake would fluctuate between 6390 and 6377 feet—the range identified in 1990 by the Federal government (U.S. Forest Service) and the State of California (State Lands Commission) as necessary to protect the integrity of the Mono Basin National Forest Scenic Area and the Mono Lake State Tufa Reserve.

3. Minimum Stream Flows. Restore and preserve Mono Basin streams and fisheries by maintaining the court-ordered minimum flows of approximately 60,000 acre-feet annually.

This provision incorporates existing court orders that require DWP to halt its illegal diversions from the Basin and to restore Mono's wild trout fisheries and stream ecosystems to their pre-diversion conditions.

After extensive testimony on the water needed to implement these court orders, the trial court in 1990 set minimum stream flow requirements and established a schedule for DWP's restoration work on stream ecosystems and fisheries. These court-ordered flows constitute the minimum water releases Los Angeles must make each year.

5. Minimum Lake Level, 6377 feet. Prevent irreparable harm to Mono Lake's scenic and ecologic values by setting the minimum permissible lake elevation at the court-ordered level of 6377 feet.

Since 1989, court orders have required DWP to maintain Mono Lake above the minimum elevation of 6377 to protect the lake's public trust and scenic values. The City cannot legally divert water when Mono Lake is below the 6377-foot elevation.

The 6377-foot minimum lake level is consistent with the findings of the U.S. Forest Service, the California State Lands Commission and the Great Basin Unified Air Pollution Control District. These agencies have identified 6377 feet as the minimum water level needed to protect the scenery, ecosystem and air quality at Mono Lake.

LOS ANGELES' NEEDS

2. Replacement water. Secure new, reliable and environmentally sound water supplies for Los Angeles. These would replace the water needed to protect Mono Lake's public trust and scenic values.

Among the water supply options, two major wastewater recycling projects now proposed by Los Angeles—the East Valley Project and the Los Angeles-West Basin Project—will generate up to 120,000 acre-feet a year of new water. The West Basin District has publicly stated that its project could provide up to 70,000 acre feet to Los Angeles "to replace their lost supply from Mono Lake."

The $60 million State Environmental Water Fund could be used to help the City finance wastewater recycling, water conservation and water marketing projects. Ratepayers in Los Angeles will save money and the new water will be credited to Mono Lake as replacement for the City's lost diversions.

The $60 million designated by the California State Legislature to help resolve the Mono Lake controversy becomes available in 1991, but only upon joint application by Los Angeles and the Mono Lake Committee.

4. Drought Year Protection. Provide drought year protection to Los Angeles and the eastern Sierra environment by permitting Mono diversions when runoff is less than 75% of normal and Mono Lake is between 6386 and 6377 feet.

During dry years, Mono Basin diversions can supplement water supplies for Los Angeles and also for eastern Sierra resources such as the Upper Owens River.

Under the plan, Los Angeles could divert water in years when runoff is less than 75% of normal, as long as Mono Lake is above the 6377-foot minimum lake level and the City releases the court-ordered stream flows.

6. Diversions During Implementation. During the first five years that replacement water supplies are being developed and Mono Lake is above 6377 feet, permit Los Angeles to divert 15,000 acre-feet a year of water from the Mono Basin.

Although Mono Lake must be restored to the 6386-foot management elevation as quickly as possible, it will take several years for the City's proposed water projects to come on line.

To assist Los Angeles during the first five years that Mono Lake is above the minimum 6377-foot elevation and court-ordered stream flows are being maintained, the City may export up to 15,000 acre-feet of water annually while replacement supplies are being developed.

WHAT THE SIX-POINT PLAN ACCOMPLISHES FOR MONO LAKE AND LOS ANGELES

Assures minimum annual water releases by Los Angeles to Mono streams, consistent with existing court orders.

Allows maximum water diversions by Los Angeles when Mono Lake is above 6386 feet, subject to minimum stream releases.

Provides for dry year water diversions by Los Angeles when Mono Lake is between 6386 and 6377 feet, subject to minimum stream releases.

Prevents water diversions by Los Angeles when Mono Lake is below 6377 feet, consistent with existing court orders.

Secures a reliable and environmentally sound supply of new water for Los Angeles to replace the Mono Basin diversions. It does so through development of proposed wastewater recycling, water conservation, and water marketing projects.

Finances the water replacement projects by using the $60 million Environmental Water Fund created by the California State Legislature specifically to help resolve the Mono Lake controversy.

STATE OF CALIFORNIA,
STATE LANDS COMMISSION,
Sacramento, CA, April 10, 1991.

To: Douglas P. Wheeler
From: Charles Warren, Mike Gage and Martha Davis
Subject: Mono Lake

This memorandum is to set forth a proposal for resolving the Mono Lake controversy and litigation in a manner which will provide significant other water policy and environmental benefits.

I. BACKGROUND

A. The Mono Lake Controversy: For over a decade, the Los Angeles Department of Water and Power (DWP), National Audubon, the Mono Lake Committee (MLC) and the State Lands Commission (SLC) have been locked in litigation over diversions of water from the Mono Basin to Los Angeles. Recent court decisions have held that Los Angeles must restore water to the lake's tributary streams and maintain a minimum water level in Mono Lake. However, approximately 70,000 acre feet of water releases are needed to protect the Lake at the level sought by plaintiffs. The nature and extent of the concern over this issue is demonstrated by the fact the state has made available up to $60 million if a mutually acceptable solution can be negotiated (AB 444-1989).

As the owner of the lands underlying Mono Lake, as trustee of the Lake's public trust resources and as a party to this costly and time-consuming proceeding, SLC seeks a solution which benefits Mono Lake, Los Angeles and the State.

The Department of Water and Power and the Mono Lake Committee also are motivated to work out a mutually agreeable resolution of the dispute. Past efforts at such an agreement have foundered on the perception that there is simply not enough water in the Mono Basin to maintain the Lake at the level sought by the Committee, the Commission, the United States Forest Service and others and to simultaneously prevent undue hardship to Los Angeles. The key to breaking the deadlock we believe is to "enlarge the pie" of water available without simply transferring the environmental problems associated with the diversions from Mono Lake to another area such as the Delta.

B. Toxic Contamination in the Central Valley: There is a critical problem of toxic agricultural drainage on the west side of the Central Valley concerning which Kesterson Reservoir is but one example. In fact, there are at a minimum 75,000 acres of land whose drainage water contains selenium and other harmful substances leached from the soil by irrigation. Estimates of the extent of the affected acreage run to over 300,000 acres. Studies of the drainage problem have been conducted by the state and federal agencies, growers and water districts. Structural solutions, such as large evaporation ponds and drainage to discharge the contaminated water into the ocean or Delta, appear to be exceedingly expensive and result in unacceptable environmental impacts. Typically, each of the affected acres receives from 2.5 to 3.5 acre feet of irrigation water every year, mostly for the growth of cotton. The reduction of the amount of water applied to these lands, then, has the most potential for cost-effective reduction of the amount of contaminated drainage. Methods to reduce the amount of irrigation water include modifying agricultural management practices and temporary or permanent land retirement.

II. THE PROPOSAL

Our review of reports and analyses and discussions with various professionals indicate that one way the Mono Lake controversy and the "Kesterson Syndrome" problem can be resolved and the other significant benefits listed above can be accomplished is by: (1) the voluntary retirement of lands having shallow water tables and soils containing high levels of selenium and, (2) the transfer to Los Angeles and other areas a portion of the irrigation water which would otherwise be applied to these lands. As there appears to be as much as 500,000 acres of land in the process of degradation, many times the amount of water needed to resolve the dispute over Mono Lake could be made available. In addition, by targeting for acquisition those lands which generate toxic agricultural drainage, the environment and public trust resources of the Valley and Delta would benefit.

III. HOW IT WOULD WORK

There are a number of scenarios, but for purposes of illustration only, we contemplate that the program would work like this. Assume that 2.5 acre feet of water for every acre acquired would become available for reallocation. One-half acre foot could be dedicated to fish and wildlife habitat in the Central Valley to help create seasonal wetlands, and to meet refuge needs or other environmentally beneficial projects. This leaves two acre feet of water which would be available annually for every acre of land retired. If 100,000 acres of land with an allocation of 2.5 acre feet of water were retired this would generate 250,000 acre feet of water to be divided between the foregoing uses which would enable 200,000 acre feet to be transferred outside the Valley without increasing or altering Delta flows. If 70,000 acre feet of this water is considered as replacement for water formerly diverted from Mono Lake, an additional 130,000 acre feet annually would be generated in new supplies.

This proposal would achieve the following benefits:

- settle a long-standing dispute, permanently protecting Mono Lake, without detrimental effects on other public trust resources such as the Delta;
- satisfy the needs of Los Angeles for water to replace that formerly diverted from the Mono Basin;
- reduce the toxic drainage in the Central Valley thereby enhancing the long-term viability of agriculture there as well as limiting the well-documented impacts of such drainage on wildlife;
- provide additional water for agricultural lands which do not contribute to the drainage problems;
- establish a cooperative effort in which state and federal agencies and northern and southern regions of the state can participate to solve some of our important water problems;
- assure compliance with the Migratory Bird Treaty Act, endangered species acts and other federal and state environmental protection laws.

IV. BASIC ECONOMICS OF THE PROPOSAL

Land values in the area of interest, based on recent sales in the Westlands Water District, range from $1,500 to $2,500 per acre. (Stroh, Dinar, Quinn; Assessment of Land Retirement as a Strategy for Long-Term Management of Agricultural Drainage and Drainage Related Problems in the Western San Joaquin of California). If 100,000 acres of such lands were retired at the above land values, the acquisition cost would be $150,000,000 to $250,000,000. These are impressively large numbers, however, small in comparison to cost estimates of $1.5 billion for Auburn Dam and $1.4 billion for impounding drainage water. Furthermore, it appears such costs could be financed by water sales. Seed money for the initial acquisitions, at least, could come from the $60 million provided by AB 444, and federal and district funds set aside to deal with the drainage problem. These would be one-time expenditures to secure permanent new water and water sales.

V. PROBLEMS AND DIFFICULTIES

This proposal is not without obstacles to be overcome. Not the least of these is the necessity of broadening the service area of the Central Valley Project (CVP) to permit CVP water to be used outside the present service area. Los Angeles is within the State Water Project service area. In addition, some water districts are known to prohibit their members from engaging in water transfers which result in losses of total irrigation water within the district. The same opposition is presumed to exist to a proposal of land retirement which allows a net reduction of water deliveries to the districts. Arrangements to transport the water via the facilities of the State Water Project and Metropolitan Water District will also have to be made and a power source to pump the water will have to be secured. These difficulties, once daunting, today do not appear to be insurmountable. There is a much greater appreciation of water policy realities by a larger number of citizens today than ever before. There are persons in positions of responsibility in federal, state and regional governmental bodies, both executive and legislative branches, who recognize the need for other than "business usual" water policy.

VI. CONCLUSION

The Mono Lake settlement proposal outlined above provides the opportunity to resolve several pressing resource and environmental problems of the State with minimum investment of money. We believe the time to implement such a program has come. We recommend, in the near future, you convene a multi-agency, executive-level working group and assign it the task of identifying and refining tasks necessary for the development and implementation of the program outlined here.

Senator **Bradley**. Thank you very much, Ms. Davis.

Les J. Small.

STATEMENT OF LES J. SMALL, PRESIDENT, ENTERTAINMENT REALTYCORP., LOS ANGELES, CA

Mr. **Small**. Good morning, Senators. I am a member of the great unrepresented class of third parties talked about earlier. My name is Les J. Small. I am president of Entertainment RealtyCorp. We are a consulting firm servicing the needs of the entertainment and real estate industries in southern California.

I am also a long time resident of Los Angeles, and as most of its residents have become, I have become acutely aware of the water problems facing the State.

As an economic consultant holding a master's degree in land economics and also as a lawyer, I view S. 484 as a very welcome change in Federal policy.

The bill will finally begin to impose fundamental economics on water usage in California. The result will be a flow of dollars from southern California to central California in return for an increased flow of water.

Clearly the most efficient way to allocate resources in a capitalistic system such as ours is through price. The Federal Government's current water subsidies programs for wholesale misallocation of this scarce resource. Ultimately the removal of subsidies is the preferred solution to our long-range water problems.

Interim solutions such as S. 484 provide relief to an untenable situation. This bill, by allowing transfers out of the Central Valley Project, will provide the impetus for the sale of subsidized water from farmers to urban users. Up to now these sales have been rare.

Water Strategist Magazine recently reported that of the 121 water transfers occurring last year, only 19 occurred in this State.

As Central Valley farmers sell their water at urban prices Central Valley farmers will actually enjoy an increase—excuse me—Central Valley will actually enjoy an immediate surge in sales and employment as this monetary gain is then used to pay for the lining of aqueducts, the purchase and installation of drip irrigation systems and other water conservation measures.

In addition, the result of the law will be to provide additional disposable income to farmers after they have planted substitute crops for some of their current monsoon crops such as rice and alfalfa sprouts.

As Southern Californians we also benefit from the exchange of money for water. Without additional supplies of water the long run growth prospects of Southern California are substantially at risk. And this is the group of third parties that were talked about earlier today.

Water intensive industries such as silicon chip manufacturing are already questioning the viability of remaining in California. Just as importantly, adding additional housing stock will increase in durable good sales and the manufacturing and service industry jobs that follow, is just not feasible without additional water resources.

The importance of the real estate industry to southern California cannot be overstated. Every dollar earned by a carpenter, a plumber, or an electrician is multiplied severalfold through supporting service sector and manufacturing jobs.

Due to lack of water building permits are becoming unavailable. Communities cannot grow and buildings cannot be built without the water necessary to sustain the occupants.

Just as clearly, the entertainment industry that my company services is also greatly at risk due to lack of water. Imagine an amusement or theme park without water rights, without green landscaping, with limited water fountains for drinking and few bathroom facilities. Not a pretty picture and the result will be fewer tourists, fewer dollars spent, fewer jobs and less income for Californians.

The water shortage also affects the making of movies and television shows. For example, for the movie Chinatown about early water wars in California to be filmed today it probably would be filmed in another State, because we do not have a reservoir filled high enough to film that film.

The agribusiness industry now accounts for only 3 percent of California's economic product, while consuming 85 percent of the State's water. As Californians we can no longer afford to hold 97 percent of the economy hostage to subsidize an inefficient farming. Once again, the great unrepresented third parties.

Some propose the status quo remain and additional water sources be manufactured. This ignores the economics. Water from desalination plants will cost water used approximately $1900 per acre-foot. Some farmers currently pay, as we talked earlier, $2.50 to $10 per foot while non-subsidized city users pay $200.

A recent front page story in The Los Angeles Times already predicts the tripling of water bills in the near future.

In summary, we will go a long way towards readdressing the current water imbalance in California through this bill, by putting market forces to work we will create a true win/win situation. Jobs and money for central California in return for water and hence jobs and money for southern California.

We urge the passage of this bill. Thank you.

[The prepared statement of Mr. Small follows:]

PREPARED STATEMENT OF LES J. SMALL, PRESIDENT, ENTERTAINMENT REALTYCORP, LOS ANGELES, CA

Good morning Senator(s) and distinguished members of the Subcommittee. I am Les J. Small, president of Entertainment RealtyCorp., a commercial real estate consulting firm serving the Entertainment and related industries of Southern California, More personally, I am also a long time resident of Los Angeles and, as most residents of Los Angeles have become, I am acutely aware of the water problems facing this State.

As a economic consultant, holding a Masters Degree in Land Economics, and also a lawyer, I view Senate Bill 484 as a very welcome change in Federal Policy. The bill will finally begin to impose fundamental free market economics upon water usage in California The result will be a flow of dollars from Southern to Central California in return for a increased flow of water.

Clearly, the most efficient way to allocate resources in a capitalist system such as ours is through price. Supply and demand will work to adjust the price of the commodity, water, and allocate the water to its highest and best uses. The Federal government's water subsidies program forces wholesale misallocation of our scarce water resources. Ultimately, the removal of subsidies is the preferred solution to our water crisis.

Interim solutions, such as S. 484 provide relief to a untenable situation. Section 4(b) by allowing transfers out of the Central Valley Project will provide the impetus for the sale of subsidized water from farmers to urban users. Up to now these sales have been rare in California. *Water Strategist* magazine recently reported that of the 121 big water transfers in 1990, only 19 were in California. With the passage of S. 484 this will change.

As Central Valley farmers sell their water at urban prices, Central California will then enjoy a surge in sales and employment as this monetary stream is then used to pay for the lining of aqueducts, the purchase and installation of drip irrigation systems and other water conservation measures. In addition, the result of the law will be to provide additional disposable income to farmers after they have planted substitute crops for their current monsoon crops, such as rice.

As Southern Californians, we will also benefit from this exchange of money for water. Without additional supplies of water, the long run growth prospects of Southern California are substantially at risk. Water intensive industries such as silicon chip manufacturing are already questioning the viability of their continued operation in California. Just as importantly, adding additional housing stock, with its accompanying increase in durable goods sales and the manufacturing and service industry jobs that follow, is just not feasible without additional water sources.

The importance of the real estate industry to Southern California cannot be overstated. Just as Wall Street and the finance industry are the engine that drives New York City, real estate development and construction propels Southern California's economy. Every dollar earned by a carpenter, plumber or electrician is multiplied several fold through supporting service sector and manufacturing jobs. Due to lack of water, building permits are becoming unavailable. Communities cannot grow and buildings cannot be built without the necessary water supplies available to sustain the occupants.

The entertainment industry that my company services is also greatly at risk due to the lack of water. Imagine an amusement or theme park without water rides, without green landscaping, with limited water fountains for drinking and few bathroom facilities. Not a pretty picture, and the result will be fewer tourists, fewer dollars spent, fewer jobs and less income for Californians. The water shortage also effects the making of movies and television shows. For example, were Chinatown being filmed today it would probably, and more than a little ironically, have to be filmed out of state due to the lack of a full water reservoir to film. More lost jobs for Californians.

According to a recent study published in *The Economist* magazine (February 16, 1991), the Agribusiness Industry now counts for only 3% of California's economic product, while consuming 85% of the State's water. As Californians, we can no longer afford to hold the other 97% of the economy hostage to subsidized and inefficient farming.

Some have proposed that the status quo remain and additional water sources be manufactured. This ignores the economics. Water from a desalination plant will cost water users approximately $1,900 per acre foot. Some farmers currently pay approximately $10 per acre foot, while non-subsidized city users pay $200. A recent front page *Los Angeles Times* story predicted the tripling of the average home water bill in the near future.

As any Southern California resident can testify, our lifestyles have been altered in the last few years. Whether resorting to painting our lawns green, brushing our teeth without water, showering with "low-flow" showerheads or simply placing bricks in our toilets, the lifestyle is not what it used to be. As constituents, we are learning that special interest groups have previously shaped the water debate. As voters, we will soon express our resentment of a system that allows one group to buy water at one twentieth the price that the public must pay—when it is available.

The S. 484 bill will go along way towards readdressing the current water imbalance in California The bill, by putting market forces to work, will create a true win-win situation. Jobs and money for Central California, in return for water and hence jobs and money for Southern California.

We urge the passage of S. 484. Thank you.

Senator **BRADLEY**. Thank you very much, Mr. Small. Let me thank the entire panel for their testimony. I find there are a lot of things in here to follow up on and a lot of things to give serious consideration to. I would like to ask each of you about 5 to 10 questions, but since we do not have time, let me just get to 1 or 2 or 3 that occurred to me as I heard your testimony.

Ms. Garrison, on the cost of doing nothing on the west side, could you, as I heard you say that, you said that it was $600 million cost, 9,000 lost jobs, those were the numbers that I wrote down.

Ms. **Garrison**. Yes.

Senator **Bradley**. Could you describe again who did this and how you got these numbers, and if you could bring the microphone a little closer or lean forward, then everyone could hear.

This is the first time that I have actually been able to have numbers put to what was my guess all along.

Ms. **Garrison**. The San Joaquin Valley Drainage program that Jean also spoke about and vice chair of the advisory committee looked at a number of scenarios when they tried to find solutions for the drainage problem.

One of the scenarios they looked at was what was called the "Future Without." Essentially a continuation of current trends without a comprehensive drainage solution.

What they found was that by the year 2040 we would have a reduction in the irrigated crop area of 550,000 acres. That is over half a million acres.

They called for some planned land retirement, a tiny percentage of what would actually be forcibly retired without their measures. The lost crop value per year was $441 million. The retail sales losses were $63-plus million per year, the total income losses per year were $123 million, and the total employment loss in person years, each year, was 9,196.

So the total economic losses are over $600 million per year.

Senator **Bradley**. Of doing nothing?

Ms. **Garrison**. Doing nothing.

Ms. **Auer**. I have a copy of that report with me, and I will be glad to give it to your staff.

Senator **Bradley**. Yes, would you please.

[The information referred to has been retained in subcommittee files.]

Ms. **Auer**. The full management report——

Senator **Bradley**. Well, you can give us the full management report, but I would just like the——

Ms. **Auer**. No, I understand.

[Laughter.]

Senator **Bradley**. Management reports are usually measured in inches. If you could just measure it in pages and give——

Ms. **Auer**. Might be a cure for insomnia.

Ms. **Garrison**. I think it is also important to point out that their program for fixing this problem included voluntary transfers, source control measures that very closely parallel your bill, because your bill was written with full knowledge of the findings of this plan.

The cost of their program was estimated to be $42 million; that is 7 percent of the cost of doing nothing.

Senator **Bradley**. Ms. Davis, will S. 484 help accomplish the objectives that you put forward in the proposal on Mono Lake? Can it occur without S. 484?

Ms. DAVIS. It cannot occur without S. 484.

Senator BRADLEY. And why cannot it occur without S. 484?

Ms. DAVIS. Because S. 484 provides the authorization for expansion of the service district and benefits to which CVP water can be used. It also eliminates any Federal obstacles to transferring water from the Central Valley to the southland.

Senator BRADLEY. So that the points that you made about improving the movement of water, taking the water that is going to Los Angeles and keeping it in Mono Lake and taking water from the Central Valley for other irrigation for fish and wildlife and for Los Angeles, keep the water in Mono Lake? Is that the idea?

Ms. DAVIS. It also is an agreement, one element of the proposal is an agreement between the city of Los Angeles and Mono Lake Committee on the protection of Mono Lake. With the protection of Mono Lake, that being defined in terms of lake levels, that corresponds to a certain amount of water that L.A. will no longer be able to divert from Mono Basin to bring down to the southland, that water would stay in Mono Lake to maintain the lake levels.

So this would be a way of replacing the water that the city would no longer be diverting from the Mono Basin.

Senator BRADLEY. Mr. Reisner, as a kind of student of the history of this whole process, where would you say we are in evolution to what you think is inevitable?

[Laughter.]

Mr. RESINER. Well, somebody said earlier that the worst thing agriculture could do right now is to resist what seems to be a historic inevitability. I think agriculture is going to be using less water in California, a smaller percentage. I think it is going to be paying higher prices for water, and I think low value crops like irrigated pasture in 40 years will not be grown much here.

I do not think that is a bad thing at all. We do not have to refrigerate milk, we do import lots of beef. But there is such a kind of an atavistic cultural twitch, you know, that we have got to keep as much of the desert in bloom that we ever put in, and we do not like to take 1 acre out of bloom. And I find this in every Western State. It is a very, very difficult thing to overcome.

But what we have not had is any kind of Federal legislation that makes this transition relatively painless and I think yours does that.

Senator BRADLEY. So you are saying that if you take a look at the crops that use a lot of water, or you take a look at crops like rice or cotton, alfalfa, or pasture, that use 50 percent of the water and are really about 11 to 13 percent of the total crop value.

Your thought is if given opportunity that some of those water rights holders would sell their water rights, essentially, take those crops——

Mr. RESINER. Absolutely. Those are the crops that need the most water and produce the least revenue. In my home State of Minnesota nobody irrigates pasture because it is too expensive to pump water from 60 feet below the surface of the earth.

Senator BURNS. You have not got any water down there.

Mr. RESINER. This is Minnesota.

Senator BURNS. I am saying Minnesota. You do not have that much subarea, you do not have that much subterranean water.

Mr. RESINER. But there is a water table and people say it is too expensive to irrigate their pasture. Here we can irrigate pasture by storing water behind the dam and moving it 300 miles in a concrete canal. That is the role of the subsidies.

I think on paper you can solve California's water crisis, at least the urban growth problem, by retiring 15 to 20 percent of the irrigated pasture, alfalfa and cotton crops. I am friends with the rice growers and all because I am not going to attack their crop——

[Laughter.]

Mr. RESINER [continuing]. And rice is not really used that much compared to pasture. It takes 45,000 gallons of water or 45,000 pounds of water to raise 1 pound of cow. And that, to me, is an inefficient use of water in a desert State.

Mr. GRAY. Senator Bradley, if I could just answer briefly your question, I would say we are at the early stages of perestroika in this process.

Senator BRADLEY. Well, that is not a very credible process at the moment. But I get what you mean.

[Laughter.]

Senator BRADLEY. Senator Burns.

Senator BURNS. You want me to address the water situation in Minnesota, they get enough rainfall that they do not have to have it, number 1. Number 2, you do not have that much subterranean water in Minnesota, and well people will tell you that. They rely a lot on potholes there for their supply of water.

Mr. RESINER. That is right.

Senator BURNS. Okay, we will set that aside for right now. What is the average price that CVP users are paying for water right now, Mr. Reisner?

Mr. RESINER. I do not know what the average price is, the range is generally $5 to $25 per acre-foot, I think. The new Friant contracts went up to, what were they——

Ms. GARRISON. $15——

Mr. RESINER [continuing]. Basically adjusted for inflation the price is the same as it was in 1949 if you adjust for inflation, perhaps a little bit cheaper.

Senator BURNS. Always have to adjust. Now, you say you are from Minnesota, how far can we ship milk?

Mr. RESINER. In Europe they do not really refrigerate milk much at all. They have these vacuum sealed aseptic containers that, you know——

Senator BURNS. I do not want to drink European milk. I have tasted theirs; I like ours.

Mr. RESINER. It does not taste as good, I grant you that.

Senator BURNS. I like mine better. And I think the rest of the people—one thing we forget about in this country, and I will put this on the line pretty quick, we can go to any grocery store any hour of the day and buy anything you want, processed in any way you want, at a very, very nominal price in this country compared to the rest of the countries, and compared to disposable incomes.

I do not think the American people want to give up on that either. That is the reason they have this little covenant with agriculture.

So going down that line we must not forget that we have still got to feed and clothe this Nation. And I would ask several questions here, we may be here till 3:00 this afternoon on this one panel.

This year hundreds of thousands of acres of land growing crops that you decide are unnecessary went out of production. Urban areas received twice as much water from farms as they did from State water projects. And those areas were still very short of water. That is a matter of fact.

Your answer is to simply take more land out of production, is that correct?

Mr. Resiner. My answer is to let the free market reign.

Senator Burns. If the free market reigns and we leave it to the highest bidder how much of the water are the fish going to get.

Mr. Resiner. My answer is to let it reign to some degree.

[Laughter.]

Mr. Resiner. You are right, Senator, fish bid lowest and last. As I read this bill this is not, we are not talking about going to a pure free market. We are talking about perhaps letting growers sell their water for a limited profit, and we are talking about a restitution tax to fisheries. That is the system that I completely endorse, and that is the one that is in this bill.

Senator Burns. And I also want to, before I get done with you, I also want to introduce you to Mr. Small over there. He does not like rice very much, so—and if the salmon population goes down, and it went from 10 cents a pound to $10 a pound, I would say that if other commodities in the food chain went down that much, their price would raise accordingly, is that correct, because it is all based on demand?

Mr. Resiner. I wish you would go out there and see those salmon ports and see the kind of suffering that they are undergoing right now.

Senator Burns. I have, and it is not nice, and I appreciate their concerns, too. In human terms, I would say where we ought to put our values—you know—I guess, I do not know.

Mr. Gray, you state that the project user should pay for the damage caused by the CVP and not the Federal taxpayer. Would you agree that the project users should only be responsible for mitigation of damage actually caused by the CVP, and that restoration of damage caused by others or for enhancement should be borne either by the State or the Federal Government?

Mr. Gray. I think that all users who contribute to damage in the CVP should bear the fair costs. This legislation, because it is Federal, deals with the Federal project. My point was simply that those who have benefited tremendously, and I agree with you, Senator, that the public has benefited tremendously from the large vital agricultural economy we have, but I think the primary beneficiaries of the project are the users.

The public has picked up either 90 percent of the internal costs and all the external costs over the years and it seems to me, under those circumstances, it is fair to impose the costs of this reform legislation primarily on the users.

Senator Burns. You are aware of the diagram that has been passed around, I think it is pretty common knowledge, that most of the damage was done prior to the building of the CVP.

Mr. GRAY. I know that there is a debate over that, but I also know from personal knowledge and reading that Friant Dam dried up the San Joaquin River during most of the year and the Shasta Dam has had a very significant effect on the decline of salmon population in both the upper river and the lower river.

Again, I think this gets back to my point that all of the users need to contribute. The problem here is that the other users are primarily subject to State law. This congress can deal with CVP, and I think it does appropriately in this legislation.

Senator BURNS. Well, let me make it clear. I think Senator Bradley's moving in the right direction. We have some problems in the area of how we do it. There is no question in my mind that there are some. We have got to take a step, we have got to start to move somewhere along the line. How you do that without impacting a lot of folks is what I am concerned with. And I come from an agricultural background, I do not have a law degree, so I have got an advantage on you.

[Laughter.]

Senator BURNS. I am just an old cow trader. But I could just see where if we take the process, like we are taking now, and we put food and fiber back, set it back on the back burner, so to speak, and that mindset gets started, I am afraid we are going to be just like every society in the history of man. We will cease to exist on the face of this earth. And that is what has happened in the past.

Mr. GRAY. If I may just briefly, Senator, I think one of the great benefits of having water transfer provisions in this bill and having California's strong water transfer provisions is that we might, in most cases, be able to have it both ways. Continue the same agricultural production, use the profits from the transfers to finance water conservation measures and keep the agricultural production.

Senator BURNS. Jean Auer, absent additional supplies, what are you going to do with the additional 10 million people in the next 12 years?

Ms. AUER. If I could wave a magic wand I would institutionalize mandatory conservation programs so that we really rethink how the people in the urban areas use the water.

In our town, for example, we have been on mandatory rationing for about 3 years. And I have had innumerable people come up to me and say, you were right, I used twice as much water on my yard as I needed to. I can use half as much water and still have a wonderful yard. And that is a simple example, but I do believe everybody in California is going to have to use water differently.

You asked a question earlier about is there enough water. I think there is enough water if we change the way we use it. And that is why I was so anxious to produce this drainage program. We have got to figure out new ways to deal with old problems so that we do not damage agriculture. It has got to be a win/win situation, I know that is sort of a buzz word these days, but it does have to be a winning situation for agriculture as well as the environment, as well as urban water users. And everybody has to do things differently.

Senator BURNS. I think I would inject something, as a practical political matter, when the population in the south of the Tehachapis exceeds 25 million people, are not the water problems of California from the Trinity and the Shasta south going to be resolved under that environment? Is it all going to go south?

Ms. AUER. Well, I think you should ask Mr. Small that question, because I live in northern California, and I have my constituents ask me that all the time. I think that is a real problem. Again I thought what happened between the Imperial Irrigation District and the Metropolitan Water District was an example of the kinds of cooperation that can take place to maintain the farms and create a new water source and keep the agricultural community alive and yet enhance the amount of water supply for the urban areas.

And I am sure some of the speakers who follow will touch on some of these in more detail.

You are right, we really do have to think about what we are doing and how we are going to change the way we do it.

Ms. GARRISON. Could I add one thing to that?

Senator BURNS. Sure.

Ms. GARRISON. I have been working on what we call the urban water conservation memorandum of understanding, it is an agreement between major urban water agencies in California and the environmental groups that would commit the urban agencies to conservation. That agreement is not signed yet; it is close. There are still some final things that have to be worked out, but that agreement could save as much as 2 million acre-feet of water in the urban areas over the next 20 years if you count in reclamation and reuse, which is not specifically covered by the agreement.

I think the main point I want to make about that is it would seem that agriculture, using 85 percent of the water, and urban users something like 7 percent of the water for domestic use, you would expect some similar level of effort. We expect some similar level of effort and I think this bill begins to move us towards that.

Senator BURNS. And should, I agree with that. Mr. Small, where do you think all true wealth of a Nation begins?

[Laughter.]

Senator BURNS. Well, I mean you got this big degree in land economics or something——

Mr. SMALL. I am just trying to figure out where you are going with that one, so we can arrive at the same place.

Senator BURNS. These old farmers back here they know where I am going with it.

[Laughter.]

Mr. SMALL. Well, where I am coming from very simply, Senator——

[Applause.]

Mr. SMALL. I recognize these people have families and it is not to say that we in southern California do not care about farming families, but the group that is not being represented here, and to the extent that I can offer up any representation for them, is the group of carpenters and plumbers and electricians, the group of, and I am told real estate developers, they even have families, I have never actually seen one, but I am told they exist.

[Laughter.]

Mr. SMALL. So those are the group of people that we also want to see balanced against the interests of the 3 percent of the economy represented here. The 97 percent of the people whose jobs, whose livelihoods stem from water, from building, from construction, from tourism and from all the other industries that touch on the availability of water, and to provide an environment in which additional people want to come to southern California.

Senator BURNS. Let me give you a quick little lesson, just a little one.

It starts in the ground. A $50 billion industry you are talking about in California, you want to cut back 20 percent, basically.

Mr. SMALL. We are not trying to cut them back, they are already——

Senator BURNS. Oh, yes, you are. You have already——

Mr. SMALL. There are nonsubsidized farmers who are doing very well in this State, and I might add again you talk about the availability of cheap food in this country, a lot of that is imported. The basic premise of the capitalistic system is we will buy the resources wherever they are cheapest.

Now absent other extenuating circumstances, orange juice that comes through Florida is concentrated and grown in South America, and I can name dozens of other examples. I am not here to talk about farming policy, I am here to talk about the 97 percent of the economy who is not otherwise represented here.

Senator BURNS. What I am talking about, when you got $50 billion for a product at the production level, then you add value on that and there are a lot of plumbers and a lot of carpenters and a lot of people that are employed in that process. In other words, the dollar received from Hollywood probably does not turn six or seven times.

I am getting notice here from my slam-dunker.

[Laughter.]

Senator BURNS. In other words, truckers, transportation, distribution systems, production, all these; that is what you are asking to be cut back here. And I am concerned about that. And I am also concerned that the life style in Los Angeles is more important than the production of fish, of the environment, that that all goes away, just to maintain a lifestyle in your scenario.

I have no further questions, but oh, you all come up with a 90-percent subsidy on this water. I had that question written down here. I have got a fantastic memory, it is just short.

[Laughter.]

Senator BURNS. I would like to know how you come up with that figure, 90-percent subsidy on that water.

Mr. GRAY. That was a finding of fact by the Federal District Court in the Peterson litigation. It was based on testimony from the Bureau of Reclamation.

Senator BURNS. Say no more. Say no more.

Senator BRADLEY. Thank you very much, Senator Burns. Senator Seymour.

Senator SEYMOUR. Mr. Chairman, I will try to be a bit more brief. My first question is for Ms. Garrison.

Ms. Garrison, is it true that as a general policy of the Natural Resources Defense Council that you generally oppose the conversion of agriculturally used lands to what Mr. Small represents, which would be urban development of those same lands?

Ms. **Garrison**. I think we probably would advocate programs that help protect prime agricultural land from urban development. We are not in the business of doing that, but I think many of us would support such programs.

Senator **Seymour**. I would think so. Now, to the degree that there is any accuracy whatsoever that S. 484 will put greater pressure if not actually in reality convert agricultural lands to urbanized development, do you think California would be better off?

Ms. **Garrison**. I do not actually think that the bill does create any such pressure. It helps resolve water supply problems. It certainly does not increase that pressure. It would, in fact, I think possibly encourage retirement of some lands that are causing water quality problems for not only the environment, but for other irrigators. And I think that is a very important benefit.

Senator **Seymour**. Well, Ms. Garrison, let me share with you my opinion and that is; if this measure results in I, as a farmer, being unable to run my business because of the destruction of contracts provision in this bill, or because somebody thinks that I, as a small businessman and farmer, can somehow continue to run my small profit margin business, and you take away 20 percent of my water or more, than I believe that person has going to seriously consider, seriously consider the real estate broker last week knocking on their door saying, "I have got a buyer for your land."

And that small farmer saying in return, "Look, my family has been farming this land for 'x' decades; we like it here. Though maybe you might get us a quick buck profit, we want to stay."

Now, that attitude quickly changes when your small margin of profit no longer exists. And so it is just my personal opinion that there is extraordinarily high risk, in fact I believe a reality, that exactly that will occur, and so if this legislation should be successful, I suggest, Ms. Garrison, that you might want to consider on behalf of your organization what will be our policy, when in fact that property is up for urban development, having been forced to move out of agricultural production.

Now, Mr. Reisner, I have some questions for you, and it is with the water transfer elements of this bill.

Anybody, I believe everybody, will agree that we have some real environmentally sensitive problems in the Delta, very delicately balanced. In fact, that was one of the key problems that nobody could overcome in my opinion, that led politically to the defeat of what they called the Peripheral Canal. That very question. Which was appropriate, I might add.

My question is this: with all the serious problems that the Delta has, how are water transfers going to help that problem. In fact, for a transfer to work, some improvements, it seems to me, would have to be made in the Delta. And so what would you do to solve the problems of the Delta?

Mr. **Resiner**. Senator, I have never gone on record as opposing a peripheral canal. I have even mentioned it in somewhat favorable light in a couple of things I have written. I agree with you absolutely, the Delta has to be fixed. This bill does not address the Delta problem. Somebody is going to have to do it.

Senator **Seymour**. How would you fix it, though, if we are going to move this along as law, do you not think we ought to address the Delta?

Mr. **Resiner**. Well, unfortunately, the best way to fix the Delta is to retire some of those islands that are in greatest danger of collapse and use those as off-stream storage facilities. It makes perfect sense.

Another thing you could do is you could build, and you know, let us be realistic here, northern California has some real power now, we do not have all those people, but we do have some power. And we probably can stop a peripheral canal from being built. We got Willie Brown, you know, he alone.

Senator **Seymour**. I have seen him in action.

[Laughter.]

Mr. **Resiner**. But a small isolated facility of some kind, and I agree, we in San Francisco have a peripheral canal that goes underground. It is called Hetch-Hetchy Aqueduct. So maybe we should build one underground to southern California so we cannot see it.

But if the basic premise were adhered to that Delta outflow south is over a 10-year average no greater than it is today, I think maybe some people could live with that. And if there were, you know, some of these water transfers back to fisheries that the Senator's bill is talking about, these were enacted, you know, we are talking about a compromise situation here, but I certainly agree with you the Delta has got to be fixed.

Senator **Seymour**. Okay. Let me ask another question, Mr. Reisner, in your opinion is an urban subdivision a higher and better use of water than a rice field that produces a crop, and also supports water fowl?

Mr. **Resiner**. I think rice fields are, because of their conjunctive use, and you were, I think, out of the room when I mentioned this, the rice farmers are my buddies now. We are working on a——

Senator **Seymour**. Yes, I heard that. I was here when you said that.

[Laughter.]

Mr. **Resiner**. We are working on a project that would use rice acreage for crops in the summertime, water fowl in the winter, and off-stream storage in the spring, and even fish flows——

Senator **Seymour**. But if it were converted to urban subdivision, which is the higher and better use of water?

Mr. **Resiner**. I think what we need in this State is a bill that essentially protects class 1 and class 2 farmland. There is good farmland and there is not so good farmland, then there is yucky farmland. That drainage land down there in the San Joaquin Valley on the west side which was opened because of the CVP, is bad land.

Senator **Seymour**. But, Mr. Reisner, please, would you answer my question? My question is even the yucky land. If it was growing rice, is there a higher and better use on a water basis with an urban subdivision versus rice? That is the question.

Mr. **Resiner**. Well, I would rather see the rice land than a subdivision, but the people are coming here, we are not going to stop them, and I do not want to see us go up and try to raid the Columbia River to find that water when we can retire, make some modest agricultural land retirement.

What we should try to do is leave the best land in production. I am talking about the Brentwood Orchards as opposed to the San Joaquin Valley bad——

Senator SEYMOUR. But that land that you put out of production, and my point to Ms. Garrison was, the land that you put out of production, unless somebody has got an idea, it is not going to sit there fallow. That land will be utilized, unless you are proposing that the Federal Government or the State Government buy all that land.

And so there is going to be a use of that land.

Mr. RESINER. You are right.

Senator SEYMOUR. My last question would be to Mr. Gray. Mr. Gray, in reading page 28 of the bill, section 9, line 21 and carrying through pages 29 and 30, talking about citizen suits.

My question of you, Mr. Gray, is if you wanted, as an attorney, knowing what you know, how to appropriately and adequately apply legal strategies, and if you wanted to block a water transfer under this provision of the bill, the question is this: would you be more able to accomplish that objective, block the water transfer legally, tie it up in court, would you be better off and more able to accomplish that objective under this bill or under current law?

Mr. GRAY. I think under current law, Senator, because the transfers would generally be subject, under both this bill and under State law, too, the jurisdiction of the State Water Resources Control Board, and that is where I would raise my first objection.

Senator SEYMOUR. Mr. Gray, under current law do you not have to meet some kind of test that at least you are in the ballpark with your lawsuit, as opposed to no test here in this bill?

Mr. GRAY. Well, I may be misreading the citizen suit provision. I do not read it as applying to the water transfers that would be subject to State law. Those would be governed by State law, they would be adjudicated before the State board and then in the State courts.

Senator SEYMOUR. Mr. Gray, I would just read from the bill, "Any person may commence a civil suit in his or her own behalf against any person, including the United States or any other governmental instrumentality, agency, who is alleged to have violated"—alleged, that is the word, key word, alleged—"to have violated, be violating, or be about to violate any provision of this act or regulation against the Secretary," in other words, go get anybody you want, any citizen can do it, and the bill even provides that under certain conditions the Federal Government may even pay for your attorneys.

Now, I am not an attorney. I was a businessman before I got into this masochistic profession, but I will tell you it sounds to me, when I read that language, it sounds to me if I had this language in my back pocket, and I wanted to block a water transfer, it would be a heck of a lot easier to do it with this language in my back pocket than having to go under existing law and demonstrate that at least I have got a case and being able to go in and at least know boy, if I lose this one I am going to have to pay these attorney's fees, as opposed to possibly having my attorney's fees paid for me by the Federal Government.

Mr. **Gray**. I guess, Senator, I would say I would focus on the two words or three words "under this act." It seems to me that the act defers to California water transfer law. I think your point is a good one and it may be that Senator Bradley and the other Members of the subcommittee would like to consider amending this provision of the bill to provide that any challenges to water transfers be raised before the State Water Resources Control Board, rather than in the first instance in a Federal District Court.

Senator **Seymour**. Thank you, Mr. Gray. Thank you, Mr. Chairman.

Senator **Bradley**. Thank you very much, Senator Seymour and Mr. Gray. Thank you. I think we have actually identified something that is rather easy to fix and I appreciate that.

Mr. **Gray**. Glad to accomplish something.

Senator **Bradley**. Let me thank the entire panel. I think there have been a number of very interesting suggestions come out of here. This wetlands unit in the Delta is one of them, among others. And I think that this is a good example of how give and take in a process with specific suggestions leads to changes in a bill and improvement of the process.

Let me thank you all very much for your testimony.

Now we have panel 5, Carl Boronkay of Metropolitan Water District; John Fraser, Association of California Water Agencies; David Schuster, State Water Contractors Association.

Now, let me try to acquaint the remaining witnesses where we are. We have about 50 minutes, let us say we have 10 minutes over that we could run without the Ways and Means Committee commencing a legal action pursuant——

[Laughter.]

Senator **Bradley**. But we need to, if we can, get you to briefly state your points related to the bill, or if you have a broader point, please make the broader point, but do not feel the need to rehash what you have already heard.

Now, let me assure you and all the subsequent witnesses that I will read each of the testimony personally and that the subcommittee undoubtedly will also read most of them.

So let us begin. We are going to try to—there is no water, Mr. Boronkay, I am sorry. We believe conservation begins right here in this subcommittee.

Mr. Boronkay, you may be first, then Mr. Fraser, and then Mr. Schuster.

STATEMENT OF CARL BORONKAY, GENERAL MANAGER, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Mr. **Boronkay**. Thank you very much, Senator Bradley and to all the Members of the panel. It is a distinct privilege to be here, to be able to address you on so important a matter as this bill and for my particular concern, water transfers.

I strongly favor water transfers and I will give you some background there rapidly.

Metropolitan, most of you know, is a large public agency responsible for providing water to southern California. We cover an area that involves six counties and over 15 million people.

We sell wholesale only to our 27 member agencies. Southern California, and Metropolitan is a reflection of this, has always been gre[redacted] have had an obsession with water security, water reliability, and we have succeeded in that way in providing several different sources of water.

But today our water situation is very precarious. If you look quickly at Los Angeles imports, they are restrained by court order, by contract, and indeed by the weather. So they used to import 470,000 acre-feet to the citizens of Los Angeles; now they import 150,000 to 200,000 acre-feet, relying on Metropolitan for about two-thirds of their supply, an unanticipated burden on Metropolitan.

Another major source of water is our Colorado River supply which Metropolitan imports, and that supply is cut in terms of reliability to less than half, from 1.2 million acre-feet to 550,000 acre-feet as a result of the U.S. Supreme Court decree in 1964, in the case of *Arizona* v. *California*.

We still get our full aqueduct, but the only reason we get it is because Arizona does not utilize its full share of water. This situation has to change adversely to our interest in the near future.

The State water project on which we rely, as do others, so heavily is little more than half completed, not a great deal of progress has been made in the last 2 decades. Metropolitan has a contract for over 2 million acre-feet; we are getting this year probably less than 340,000 acre-feet.

Even our groundwater basins which have been a real reliable supply throughout the years in Southern California, which took many, many millions of dollars to develop, are now uncertain. We find contamination of all the major basins, generally from the disposal, the negligent disposal of solvents used in manufacturing since World War II.

Given this situation we are very concerned and I add to it the tremendous population growth, some 300,000 people a year. We are in a position, of course, where we are looking to major shortages and potential economic disasters.

We are doing a lot of things and you all know about our Imperial Irrigation District conservation agreement and our approach to Palo Verde to reduce irrigation in dry periods, and our arrangement with the Arvin Edison water storage district, a conjunctive use program, which makes a lot of sense. We get their Central Valley Project water in return for their taking water that we put in their groundwater basin. It is a mutually beneficial arrangement. It is the kind of thing we look to.

Inwardly we are heavily investing in conservation, both education of adults and school children. We have spent millions of dollars towards that end. And our conservation program also consists of subsidizing plumbing retrofits, low flush toilets, showerhead restrictors. We are heavily invested into water reclamation or wastewater reuse. We subsidize our member agencies about $154 an acre-foot in order to make those programs viable.

It is interesting that I heard others are paying $5 to $25 an acre-foot. We are merely subsidizing water conservation and reclaimed water to the tune of $150 or even more, and that is not the cost of that water, that is just our contribution. The water cost is probably double that when it gets to the consumer.

We are heavily into a new program of contributing $250 an acre-foot to groundwater recovery. That is cleaning up and treating contaminated groundwater in order to make it potable and in order to stop the spreading of contamination in the Basin and to allow the Basin to be used for storage.

So we are doing a great deal. We are even looking at desalting, both brackish water and even seawater. Seawater comes in at perhaps $2,000 an acre-foot. I think it is wrong to impose those type of costs on anyone, certainly not urban users.

Transfers are the way of the future; 15 percent transfer from the agricultural use makes a lot of sense to me, a lot of common sense. We have transfers now. We have an example. The State water bank resulted in the voluntary sale of water by farmers, some 800,000 acre-feet to the State, which in turn will sell it to water-short urban and farm areas. That was done voluntarily. It is the operation of the free market system. It makes a lot of sense.

I think transfers can be improved greatly. We have developed some 34 million acre-feet of water—am I running out of time?

Senator BRADLEY. Yes, you are at 5½ minutes right now.

Mr. BORONKAY. I am going to go faster. We developed a tremendous amount of water in this State, 34 million acre-feet for use. The division is 80 percent on the farm, 20 percent in urban areas. There is nothing sinister about that. That is the way it developed. That was the public policy at the time.

Times have changed. Policies have to be re-examined. We looked to farm water and we have to ask, is it sensible to continue that type of division of our water supply. And we look at the value, the product on the farm and we get about $400 an acre-foot return from farm products in the San Joaquin Valley and $150 in the Sacramento Valley. The same acre-foot results in $500,000 product in urban areas.

We look to 1,000 acre-feet used in urban areas resulting in some 3,300 jobs. The same 1,000 acre-feet results in eight jobs in the farming community. It makes sense to say some of that water should go over to urban use; 15 percent would take us a long way into the future. We do not suggest you do it by mandate, by official fiat. The free enterprise system which is permitted to operate throughout society is not permitted to operate here. We need legislation that would allow farmers in the Central Valley Project to voluntarily sell some water when they see fit.

Thank you.

[The prepared statement of Mr. Boronkay follows:]

STATEMENT OF CARL BORONKAY, GENERAL MANAGER, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Senator Bradley and members of the committee, thank you for the opportunity to appear before you today to address legislation of considerable importance to California, the "Central Valley Project Improvement Act" (Act), S. 484. I serve as the General Manager of The Metropolitan Water District of Southern California (Metropolitan), a public agency charged with the responsibility of providing supplemental water supplies to the 15 million people living within its 5,200 square mile service area. Before becoming General Manager, I served as General Counsel at Metropolitan from 1980 to 1984.

Prior to joining Metropolitan in 1976, I served as Senior Assistant Attorney General in charge of the public resources section of the California attorney general's office. In that capacity, I was responsible for legal advice to, and representation of, various state agencies, including: the Department of Water Resources, Colorado River Board of California, Coastal Commission, Department of Fish and Game, Water Resources Control Board, Department of Agriculture, Department of Parks and Recreation, and California Energy Commission.

I hold a bachelor of laws degree from the University of California, Los Angeles, and a master of laws degree from the University of Southern California. I am a member of the California bar and a member of the bar of the United States Supreme Court and have argued before that court.

S. 484 has two primary areas of emphasis: first, fish and wildlife resources affected by the operations of the Central Valley Project (CVP) and, second, encouraging the transfer of CVP water.

Regarding the fish and wildlife provisions of the Act, Metropolitan is committed to the protection and enhancement of California's fish and wildlife resources as an essential part of securing additional reliable water supplies for the various beneficial uses within the State. In California, the responsibility for protecting these valuable natural resources rests, in large part, with the State Water Resources Control Board, which is attempting to balance between the needs of the environment and the needs of water users, including those in the urban and agricultural economic sectors in an exceptionally complex policy area.

My main purpose here today is to address those provisions of S. 484 related to voluntary agricultural water transfers. Metropolitan has established policies which are strongly in favor of water transfers, and, indeed, we are at the forefront of pioneering the evolution of water transfers in California. I strongly agree with the underlying premise of the water transfer provisions of the Act: that water transfers make economic common sense as an essential part of California's future and that federal CVP water should be transferable consistent with State laws that encourage water transfers.

THE ECONOMIC IMPORTANCE OF WATER SUPPLY RELIABILITY

California enjoys a remarkably healthy and well-diversified economy with an annual income that currently exceeds $700 billion and is growing. The State has the largest manufacturing sector in the United States economy, larger by more than 70 percent than number two, New York. California accounts for a sharply increasing share of international trade as the nation's balance of payments position improves. Together, Southern California and the San Francisco Bay area are the undisputed, and increasingly important, centers of Pacific Rim trade. California also has the nation's largest "high-tech" industrial sector. Moreover, California's workers earn among the highest real wages of the fifty states. For these compelling economic reasons, California, north and south, has, during the past quarter century, grown at roughly twice the rate of the national economy and is expected to do so for the next quarter century. Today, California accounts for one out of every six new jobs created in the national economy.

The fact is that the economic stakes associated with a reliable water supply are enormous—not only for Southern California, but for the whole state and our nation as well. Like all modern industrial economies, California's economy is dependent upon a reliable economic infrastructure. Along with goods and services like electrical energy, natural gas, and telecommunications, water provides an essential component of that infrastructure. Like the services provided by the other infrastructure industries, water is fundamental to the quality of life of every household and is used by virtually every business to one degree or another. Because the need for the basic services of these infrastructure industries is so ubiquitous in our economy, shortages of these services can be especially costly and the reliability of their supply is especially important.

In most of the other infrastructure industries, reliability standards are established and maintained to assure that supplies are adequate to meet demands except under the most extreme conditions. In the electrical energy industry, for example, virtually every utility in the United States must be able to demonstrate that supplies will be sufficient so that outages do not accumulate to more than 24 hours, or one day, in a ten-year period. This reliability standard is intended to assure that the probability of shortage is extremely small substantially less than one percent. Similarly, in the telecommunications and natural gas industries, reliability standards are established to assure minimal chances of shortage.

THE RELIABILITY OF URBAN WATER SUPPLIES

In sharp contrast, California's nearly one trillion dollar economy currently is dependent upon an unreliable water supply system. Reliability of supply has, of course, long been a central concern to California water agencies, which have a proud tradition of far-sighted, comprehensive planning and financial commitment. The Colorado River Aqueduct, which Metropolitan was originally created to construct and operate, was designed with a capacity to reliably meet demands decades into the future. Similarly, the State Water Project (SWP) was designed to prevent shortages to municipal and industrial customers even through a repeat of the Great Seven-Year Drought which occurred from 1928 through 1934 and represented the drought of record when the project was planned. Since the completion of the first stage of the SWP, however, California has not had the political leadership to bring about a consensus that would allow us to maintain the supply system adequately. Consequently, water supply reliability has slipped to economically dangerous levels.

Water demands in Southern California, currently about 4 million acre-feet (MAF) annually under normal weather conditions, are expected to exceed 5 MAF by 2010 despite aggressive implementation of conservation programs to achieve maximum reasonable reductions in water use. Despite these growing demands, Southern California's reliable water supplies have been substantially reduced in recent decades. The Colorado River Aqueduct historically provided more than 1.2 MAF of water to Southern California, but today can provide less than one-half this amount on a reliable basis. Similarly, Metropolitan has a contract for more than 2 MAF of the total 4.3 MAF of SWP entitlements, but the total dependable supply of the project during a repeat of the seven-year drought is estimated at only 2.3 MAF. Indeed, earlier this year, the Department of Water Resources announced deliveries to Metropolitan of only 170,000 AF—less than 10 percent of our contract entitlements—and even after the "March Miracle" rains, SWP deliveries will be 80 percent short of municipal and industrial water requests. Because of the loss of water to the City of Los Angeles from Mono and Inyo counties, Metropolitan, in its regional planning studies, has reduced by more than 150,000 AF its estimate of reliable supplies available from the Los Angeles Aqueduct. Even supplies from Southern California's local groundwater basins, which account for about one-third of our water supply, have become uncertain as contamination due to industrial solvent use dating back as far as World War II threatens virtually every major basin in Metropolitan's service area.

As rising water demands confront shrinking supplies during the 1990s, the prospects for avoiding shortages in Southern California are bleak. By 1995, the region will face a coin-toss chance—roughly 50 percent—of having at least some shortage in water supplies in any given year. The chances of a shortage exceeding 1 MAF are about 10 percent in any given year. These potential shortages are not a reflection of the capriciousness of nature; indeed, these probabilities of shortage reflect the high likelihood that the current drought will soon end. The estimated future shortfalls in supply are due not to California's drought problem, but rather to our substantial infrastructure problem.

Unless steps are taken immediately to restore the reliability of the system, the prospect of shortages will steadily grow. By 2000, the probability of water shortages in a given year in the Southern California economy will creep to about 70 percent and the probability of a shortage exceeding 1 MAF will rise to about 20 percent. By 2010—a relatively short time-frame in infrastructure planning—in a given year, the probability of shortage climbs to 90 percent and shortages exceeding 1 MAF will be quite common, occurring roughly once every three years.

THE ECONOMIC CONSEQUENCES OF THE RELIABILITY CRISIS

Although these statistics on the chances of shortage are specific to Southern California, the situation is not markedly different in Northern California. In fact, the urban economy of California faces a reliability crisis in its water supply infrastructure of considerable magnitude. In the other infrastructure industries, the degree of unreliability now being experienced in the water sector would be viewed as nothing less than an economic catastrophe. In the urban economy, the consequences of a lack of reliability in water supply will be significant for residential, commercial and industrial water users alike.

When shortages strike, residential customers are invariably conscribed as the first line of defense in adjusting to inadequate supplies. As a result, inconvenience and a loss of quality of life are widespread. A 1987 economic study conducted for Metropolitan and the State Water Contractors found that, considering inconvenience alone, Californians are willing to pay substantial amounts to improve water supply reliability. This demonstrates Californians strong desire to avoid the sacrifice in quality of life necessitated by water shortages (see State Water Contractors, Bay-Delta Exhibit 54, 1987).

Beyond inconvenience, the direct economic costs of residential shortages can be substantial. A recent study of the impacts of the current drought in Santa Barbara estimates that about one-third of all the turf grass on private residences and commercial property has perished as outdoor watering has been curtailed to respond to water shortages. Perhaps more significant, more than 220,000 mature trees on private residences and commercial property have died for lack of irrigation. Another 550,000 trees in and around Santa Barbara have lost "condition," that is, they are in such a weakened state and susceptible to disease and pests that their chances of survival are significantly lessened. The loss of our urban greenery as shortages become more common, widespread, and severe in California will be staggering, adding up to hundreds of millions of dollars as dead vegetation is either replaced or property values decline.

Although private residences may be the initial target of shortage management, the economic impacts inevitably reach the business sector. The "green industry," which provides garden maintenance, market flowers, and nursery products, has annual sales of about $6.5 billion in California. This industry is an early casualty in the water wars as customers stop buying the industry's products, and workers—usually low-income, unskilled workers—lose their jobs. Similarly, the tourism and construction industries, each vital to parts of the California economy, suffer significant economic losses due to shortages even in their early phases. With regard to Santa Barbara County, for example, tourists have increasingly chosen not to travel to this previous garden spot because of the drought and attendant water shortages. The economic cost to the local economy of this shortage-related downturn in tourism is estimated at $30 million during 1990 alone.

A recent study conducted for the California Urban Water Agencies (CUWA) concludes that water supply unreliability is beginning to undermine the long favorable business climate of the California economy. The CUWA study surveyed approximately 250 California businesses in water sensitive industries, including refining, food processing, and the "high-tech" electronics, aerospace, and defense industries. If these industries were to experience shortages of 30 percent—an all-too-likely event in the relatively near future, given the current state of reliability of urban water supplies—annual income losses would be about $8 billion. Employment losses due to such a shortage episode would likely total about 56,000 jobs, with the greatest impacts in Los Angeles and Santa Clara counties (about 21,000 lost jobs in each). These large losses reflect direct costs incurred only in these water sensitive industries, which account for about one-fifth of the California economy, and do not include costs due to multiplier effects as these losses ripple through the State's economy.

Perhaps more disturbing, the CUWA study confirms that the unreliability of water supplies may already be affecting California's ability to compete for plant and equipment investment dollars. One out of three of the firms surveyed indicated that a lack of water supply reliability could cause them to move their plant and equipment investments outside California. One-half of the surveyed high-tech electronics manufacturers in the "Silicon Valley", which is a major part of the backbone of the San Francisco Bay area economy, indicated that water supply unreliability is making business investments in California less attractive, as did a similar portion of aerospace firms in Southern California.

RESTORING RELIABILITY: THE NEED FOR A COMPREHENSIVE SOLUTION

The economic case for restoring the reliability of urban water supplies to levels commensurate with the other infrastructure industries is compelling. To achieve this objective, in a manner that is both environmentally and economically sound, California will require a comprehensive solution.

Most important, the State requires major improvements in its water supply infrastructure. It is absolutely essential that we overcome the reigning politics of fear and distrust and find the political courage to construct facilities in the Sacramento/San Joaquin Delta to more effectively transport water, protect drinking water quality, improve Delta fisheries and the environment, and avoid catastrophe in the event of an earthquake or major flooding in the Delta region. Further, major additional offstream reservoir storage is required south-of-the-Delta, including the proposed Los Banos Grandes Reservoir to be constructed by DWR and the Eastside Reservoir to be constructed by Metropolitan in Riverside County.

While it is true that the Peripheral Canal was voted down by the electorate in 1982, it is no less true that circumstances have changed dramatically since that time. The need for such a facility is far greater today than a decade ago in terms of an ailing Delta environment that can be remedied satisfactorily only by isolated facilities, in terms of more stringent drinking water quality standards that require the best possible source water quality, and in terms of a statewide economy increasingly weakened by an unreliable water supply infrastructure.

One further, vitally important change is that in 1991 the leaders of the water community recognize that major facilities, while crucial, are only one component of a much broader comprehensive policy. The other critical components of that policy include: conservation in the city and on the farm, incentive pricing reforms, reclamation (wastewater reuse), recovery and treatment of contaminated groundwater, the development of drought contingency plans, conjunctive use of surface reservoirs and groundwater storage, and water transfers. Metropolitan's strong commitment to a broad policy approach is described in detail in our Regional Urban Water Management Plan, most recently updated in December 1990. Similarly, the State Water Contractors are developing a comprehensive water policy which will be described in a joint policy document to be completed later this year.

THE CENTRAL ROLE OF WATER TRANSFERS

In the future, water transfers will be one of the most important components of California's evolving water policy. On many occasions in the past, I have emphasized the importance of developing water transfers on a voluntary basis. Over the long term, California must create a dynamic, open system for the transfer of water from lower-value to higher-value uses, a system that can adapt to changing circumstances as necessary.

Currently, however, water transfers are inhibited by both technical and institutional constraints. From a technical perspective, the potential for transfers is seriously limited by environmentally-driven constraints on pumping capacity in the Delta. In fact, one of the compelling reasons for constructing facilities in the Delta is to facilitate the transportation of transferred water in an environmentally sound manner. Institutionally, the negotiation and implementation of transfer agreements can be exceptionally difficult, and it is these constraints which this legislation seeks to loosen.

During the past decade, California water law and policy has appropriately placed an increasing emphasis on water transfers. Indeed, policies in support of transfers have a strong constitutional foundation. Article X, Section 2 of the State Constitution mandates the reasonable and beneficial use of water and forbids wasteful uses. This constitutional provision was instrumental in the State Water Resources Control Board's finding that the Imperial Irrigation District (IID) was wasting Colorado River water through inadequacies in its irrigation system and practices. That finding, in part, laid the foundation for the heralded conservation agreement between Metropolitan and IID. Beginning in 1982, the California legislature enacted a series of laws to promote water transfers as a means of providing water short areas with increased supplies. In the 1990s, it is the unmistakable intent of State water policy to promote water transfers.

METROPOLITAN WATER TRANSFER ACTIVITIES

As the water policy environment has changed, Metropolitan has emerged as a leader in the development of innovative water transfer projects. In addition to the landmark agreement with IID, Metropolitan obtained federal legislation authorizing the lining of portions of the All American Canal and the Coachella Branch of the canal to conserve water in agricultural areas and make additional Colorado River supplies available for use in Metropolitan's service area. In the San Joaquin Valley, Metropolitan has negotiated a major groundwater conjunctive use program in cooperation with the Arvin-Edison Water Storage District, a CVP contractor located in Kern County. These three programs, each requiring years to negotiate and develop, will increase dry-year supplies available to Metropolitan through the transfer of water now used in agricultural areas by about 300,000 AF. With these programs on the road to implementation, Metropolitan is continuing negotiations for additional water supplies with IID and the Palo Verde Irrigation District on the Colorado River and is actively seeking additional transfer agreements with agricultural water agencies in the Central Valley.

THE 1991 DROUGHT EMERGENCY WATER BANK

In 1991, California experienced the value and importance of water transfers with the development of Governor Wilson's Drought Emergency Water Bank (Bank). The Bank, created formally in April 1991 through an agreement among the Department of Water Resources and urban and agricultural water agencies throughout the state, sparked the transfer of water on an unprecedented scale. Originally scoffed at by skeptics, the Bank purchased more than 800,000 AF of water from willing agricultural sellers in the span of a few months. While the allocation of Bank water is not yet final, it is expected that about 80 percent of this water will be used to reduce the significant shortages experienced during 1991 in urban areas, primarily in the San Francisco Bay area and in Southern California, and the remaining 20 percent will be used by high-value agricultural crops, primarily in the southern and western San Joaquin Valley.

The majority of water in the Bank was made available by innovative groundwater programs and purchases of stored water. Under the groundwater programs farmers agreed, in exchange for payments from the Bank, to use groundwater to irrigate crops, thereby leaving the surface supplies they would otherwise have used for purchase by the Bank. Such programs proved beneficial for agricultural areas and urban areas alike and were generally noncontroversial. More controversial was the water made available by farmers who, for negotiated payment, agreed to fallow land during the drought crisis. In fact, more than 300 land-fallowing contracts, representing more than 400,000 AF of supplies, have been received by the Bank from farmers. About 90 percent of these contracts are with landowners in the Sacramento-San Joaquin Delta region, where almost every row crop was fallowed to some degree to make water available to the Bank.

Because of the extent of the fallowing activity, some are concerned about possible negative economic impacts resulting from a decrease in agricultural production. But the fact is that from the perspective of the overall state economy, water has a much higher value in the urban sector than in the agricultural sector. For example, the average value of shipments of agricultural products per acre-foot is about $400 in the San Joaquin Valley and $150 in the Sacramento Valley. In contrast, the same acre-foot of water in industrial uses in the urban economy of the State supports average shipments with a value of more than $500,000 per AF. In some urban industries, including computer equipment, soaps and cleansers, electronic components, motor vehicles, and aircraft and aerospace, the value of shipments per acre foot of water use is substantially higher, ranging from $1 million to more than $3.5 million.

Similarly, water use in the urban sector supports far more jobs than in the agricultural sector. The agricultural economy provides about eight jobs for each 1,000 acre-feet of water use. The same amount of water supports an average of 3,300 jobs in urban industries, and employment in some of the high-tech industries is 17,000 workers per 1,000 acre-feet of water use. The inescapable economic fact of life is that when we are confronting shortages of the magnitude witnessed this year—an increasingly likely situation in the future—we must find ways to facilitate the transfer of water to higher value economic uses to protect the overall state economy.

THE UNTAPPED POTENTIAL FOR CENTRAL VALLEY WATER TRANSFERS

In the Central Valley of California, the potential is substantial for voluntary water transfers that would be mutually beneficial for agricultural and urban interests, as well as for the environment. That potential is largely untapped. Aside from the negotiations between Metropolitan and the Arvin-Edison Water Storage District and the crisis-driven 1991 Water Bank, little progress has been made to develop specific water transfer programs. Some of the types of specific programs that should be developed in the near-term include the following:

Conservation Programs. On the west side of the San Joaquin Valley, where drainage problems are the most severe, there exists significant potential for conservation programs that can solve local problems and make water available for transfer. The San Joaquin Valley Drainage Program Final Report identifies 625,000 AF of potential water use reductions that would make water available for water-short users in local and urban areas. The proposed actions to reduce applied water use include improvements in irrigation practices, IID-type conservation programs involving lining canals and other system improvements, and retirement of certain agricultural lands.

Conjunctive Use. In the eastern San Joaquin Valley and in the Sacramento Valley, major opportunities exist for development of groundwater conjunctive use programs. In the east San Joaquin Valley, coordinated management of groundwater storage and surface reservoirs could generate water for the beleaguered fisheries of the San Joaquin River, its tributaries, and for water-short areas elsewhere in the state. In the Sacramento Valley, one of the fundamental lessons of 1991 is that we must develop additional capability to conjunctively utilize the vast, untapped groundwater potential of this region. Although currently constrained by inadequate facilities in the Delta, such programs have significant potential for meeting urban and environmental water needs.

Dry-Year Options. Throughout the Central Valley, many agricultural landowners could improve the long run financial viability of their farming operations by participating in voluntary, long-term, dry-year option agreements. Under such agreements, landowners would agree to reduce the amount of land in production during dry years in exchange for standby payments received every year and additional option payments when the urban area exercised its option to generate dry-year supplies. While concerns may be raised about possible third party impacts, the success of this approach during 1991 in the Delta suggest that it warrants consideration on a larger scale in the future.

Voluntary Water Purchases. Finally, it will be necessary to allow urban areas to purchase water outright through long-term contracts by acquiring water rights directly, or through the purchase and retirement of land on a voluntary basis. Outright purchases, especially those involving the acquisition of agricultural land by urban areas, are presently quite controversial. However, such transfers must be included in the mix of future transfer activities. California water agencies, including Metropolitan, will undoubtedly continue to develop conjunctive use programs, such as the Metropolitan/Arvin-Edison agreement, and conservation programs, such as the IID conservation program and All American Canal lining project. But, in the future, when landowners on a voluntary basis seek to sell land or water rights to urban areas in need of additional reliable supplies, California must have the legal framework to facilitate such transfers.

PROVISIONS OF THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT

Originally, the Central Valley Project was conceived as a state project and, but for the financial hard times of the Great Depression, the CVP would have been constructed as such. However, while state policies clearly promote water transfers, constraints on CVP water and operations seriously impede the involvement of this water, which accounts for one-fifth of all developed water in the state, in water transfer programs. For example, during 1991, while water managers throughout the State were working to find ways to transfer water through the Bank and stave off economic disaster, the CVP declared its supplies off limits. Thus, a farmer growing crops with non-CVP water was encouraged to participate in the Bank, either by fallowing land or switching to groundwater, but an otherwise identical farmer who happened to use CVP water was forbidden to do so. Over the longer term, many potential projects that would be highly beneficial to urban and agricultural interests may be ruled out because of outdated restrictions on the place and purpose of use of CVP water.

WATER TRANSFER PROVISIONS OF THE ACT

Senator Bradley, in his remarks at the May 8, 1991, hearing on this legislation in Washington D.C., stated that: "S. 484 is intended to reduce existing Federal meddling in California's affairs, not increase it." Metropolitan supports the provisions of the Act which, consistent with Senator Bradley's remark, seek to bring 8 MAF of federal CVP water under the umbrella of California water transfer policy. Section 4(b) of the Act provides for the sale of 100,000 AF of CVP water to the highest bidder, subject to a minimum bid of $100/AF. More generally, Section 5(a) provides that "all (CVP) water subject to contract may be transferred, whether by sale, lease, exchange, donation, or other means consistent with applicable State law, to any other California water user . . . for any purpose recognized as beneficial under State law, regardless of price or duration."

As we interpret such provisions, they essentially erase historical service area boundaries of the project and would allow CVP water to be transferred anywhere it can be physically delivered, subject to the provisions of State water transfer laws. This loosening of the existing system to enhance water transfers would be highly beneficial.

While the Act's objective of promoting water transfers is desirable, the legislation contains certain provisions that will inhibit transfer activity. In particular, Section 5(a) also imposes an arbitrary 25 percent tax on water transfers, which will make transfers less desirable for buyers and sellers alike. Moreover, if a water agency or other entity seeks to transfer water to an urban buyer under Section 5(a), Section 5(c) subjects the seller to federal influence over local groundwater resources. Comparable provisions are not included in State water transfer law precisely because the objective of California policy is to promote water transfer activities and not discourage them. Such provisions will not lead many agencies to the negotiating table and should be removed.

FISH AND WILDLIFE PROVISIONS

The fish and wildlife provisions of the Act seem inconsistent with its purpose, as stated by Senator Bradley, to reduce federal meddling in state affairs. In fact, these provisions inject an unprecedented degree of federal intervention into what have traditionally been states' water rights issues. For example, Section 4(a)(2) appears to require that state water right and allocation decisions by the State Water Resources Control Board (SWRCB) survive a veto by the Environmental Protection Agency before federal water contracts can be renewed. Section 4(a)(3) requires that, before contracts can be renewed, standards must be established for the Delta and for San Francisco Bay, despite the fact that available evidence regarding the Bay is inadequate to do so. Such issues related to the San Francisco Bay-Delta are well within the expertise and responsibility of the SWRCB, which has authority to constrain CVP operations to achieve environmental objectives.

To be sure, California has many important environmental problems that must be resolved. The CVP is a contributor to these problems and can be an important part of the solution. Along with restoring the reliability of water supplies for the California economy, the protection, restoration, and enhancement of the State's fish and wildlife resources cannot be overlooked. Policies to achieve this objective must strike a balance between the need for environmental improvement and the protection of the other beneficial uses of water.

S. 484 does not appear to provide for balanced environmental solutions. The Act's fish and wildlife restoration objectives are defined in Section 6(a) in exceptionally broad terms. Yet, these vague objectives must be fully satisfied before contracts for other beneficial uses of water can be considered. The Act further uses the power of the federal government to arbitrarily tax a variety of water agencies and other entities. Agencies negotiating a transfer of CVP water must pay a 25 percent tax under Section 5(a); CVP contractors who seek a short-term contract exceeding one year in duration must pay a tax of up to 20 percent of their entire federal water supply under Section 4(c)(1). Moreover, these taxes are to be levied uniformly on transactions with dissimilar features and appear to have little regard for the economic impacts they could generate or the possibility of alternative, less costly approaches.

A preferable approach is to target environmental programs to the specific problems that must be remedied. Such an approach has recently been defined in draft legislation developed by several state and federal water contractors. This draft legislation, entitled the "California Central Valley Fish and Wildlife Act of 1991," contains a comprehensive set of specific programs to protect, restore, and enhance fish and wildlife resources. Among other specific programs, the draft legislation would require the following:

- Mitigation of direct fishery impacts at the Tracy and Contra Costa Canal pumping plants;
- Development of temperature and turbidity controls for releases from Shasta Reservoir;
- Rehabilitation and expansion of the Coleman National Fish Hatchery and construction of a salmon and steelhead hatchery on the Yuba River;
- Implementation of specific measures to restore habitat in the Sacramento and San Joaquin rivers and their tributaries;
- Implementation of a Delta Cross Channel Closure program to protect striped bass populations from project operations; and
- Provision of dependable water supplies of suitable quality for Central Valley wildlife refuges.

This type of targeted environmental management program can generate substantial fish and wildlife benefits without denying water supplies for other beneficial uses. To the extent that additional supplies of water are required to further improve the environment, Metropolitan believes that such supplies should be developed through innovative conjunctive use programs, of offstream storage projects, and water transfer agreements. Such an approach will achieve a better balance between the environment and other water uses.

California can no longer wait to solve its environmental and water supply problems. It is with an appreciation for the complexities of that task that we have reviewed the Central Valley Project Improvement Act. Once again, we thank you, Mr. Chairman, and members of the Subcommittee, for your leadership and courage in addressing these difficult issues. I look forward to working with you to promote water transfers on a statewide basis and to help resolve California's environmental problems as part of a broad-based effort to restore the reliability of urban water supplies.

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Senator **BRADLEY**. Thank you very much, Mr. Boronkay.

Mr. Fraser.

STATEMENT OF JOHN P. FRASER, EXECUTIVE DIRECTOR/GENERAL COUNSEL, ASSOCIATION OF CALIFORNIA WATER AGENCIES

Mr. **FRASER**. Mr. Chairman, committee Members, we have in the association over 400 water agencies, of which Mr. Boronkay's agency is one agency, albeit, a very big one. So we have a different balancing act to perform here, so I will be a little bit different in my emphasis than Mr. Boronkay was.

Some of the comments made by the previous panel I am tempted to comment on, but I think the committee Members have adequately addressed many of those concerns. Let me just address one, however, and that is the subject of water prices.

It is common and widespread to talk about $3 water and $5 water. I think that what we should do is talk about instead the cost of the water when it gets to the farmer. That is really the important equation we want to talk about when we are talking about water prices.

Three dollar water many times can become $60 water by the time that farmer finally applies that water to a crop.

Mr. Chairman, I am going to address several of the questions that you have asked and respond in that way. You have my statement. I would like that to become part of the record.

Senator **BRADLEY**. It will be.

Mr. **FRASER**. Thank you. Your first question to us was should S. 484 be amended to authorize the Secretary to increase the water supply of the Central Valley Project. Had you ended the sentence there, I would have enthusiastically said yes.

However, you qualified it by saying by making use of undeveloped groundwater. There is not too much undeveloped groundwater in the State. It is a real trick to try to find any, as a matter of fact.

What groundwater there is, is certainly our water bank that is used during times such as this when we are experiencing a drought.

You also asked whether CVP might be expanded to implement conjunctive use of ground surface supplies. Central to any conjunct use program is an imported water supply. We would say we must develop more water in order to respond to Mr. Boronkay's concerns and in order to respond to conjunctive use programs. We have found it to be very valuable and would like those expanded. But we need more water development. There is not any question.

And participating off-stream storage facilities we would certainly encourage that.

Purchasing of water from private water right holders. We have heard a great deal today about third-party impacts and why we must be careful to address those impacts.

I would like to suggest to the committee that we avoid third-party impacts in water transfers. That is the only way to address third-party impacts. And that is to avoid them.

If a water transfer is going to have a substantial adverse impact on a local community, then by all means that water transfer probably should not take place, except under the most extreme situations where people were literally going without water. Then you might consider it.

Otherwise I think you have damaged the local economy and providing Federal welfare payments to those people is just not a satisfactory way of going about doing business.

Senator **Bradley**. Mr. Fraser, can you wrap up?

Mr. **Fraser**. Yes, sir, I will.

Senator **Bradley**. I apologize but we have a lot of witnesses and——

Mr. **Fraser**. I understand.

Senator **Bradley** [continuing]. I am afraid we are going to have to vacate. I am prepared to stay here all afternoon, but——

Mr. **Fraser**. Maybe we can come back after 5 tonight.

I would like to endorse the CVP Water Association proposal that Mr. Schuster is about to outline for you. We think it is worth consideration and we think many parts of that proposal can be incorporated in your bill. We want to work with you on your bill and we want to, by all means, come up with a solution that helps California and answers the concerns that have been expressed here today. Thank you.

[The prepared statement of Mr. Fraser follows:]

Prepared Statement of John P. Fraser, Executive Director/General Counsel, Association of California Water Agencies

Mr. Chairman, thank you for scheduling this hearing in our state capitol today. We appreciate your willingness to travel so far from New Jersey and for your work in the Senate on California water issues. Unfortunately, most people who have lived outside the west most of their lives ever fully appreciate or truly come to understand the complexities of western water and in particular, California water issues. I also value the opportunity to appear to present the Association of California Water Agencies' views and positions on S. 484.

ACWA is comprised of more than 400 water agencies of all types throughout the state. Our membership consists of irrigation districts, urban water agencies and municipalities who rely on state water project and CVP supplies, ground water and other surface water supplies in northern California and the Colorado River. Since

1988, our formal policy has been "water for Californians." With that policy as our guide, we have sought to avoid the divisiveness that accompanies most debates of water in this state in order to assure adequate supplies for urban as well as agricultural areas of the state. We do regret that the debate brought about by S. 484 tempts one to simplify this legislation into a battle between urban and agriculture and north v. south.

Clearly, most Californian's think that things need to be done to address our water shortages. In fact, last year ACWA released a major opinion survey, conducted by the field institute, which revealed some surprising information about Californian's views on water. There is a clear consensus that there is a serious water shortage. More than 90 percent of those surveyed said there was a shortage. Californian's responded overwhelmingly, 4 out of 5, that additional storage/supply facilities must be built in the next ten years. Forty percent held the view that this was a very urgent need. The vast majority of Californians are far ahead of our political leaders on the water needs for this state.

As you may recall, most of the association's formal comments were presented to you by letter on March 25 of this year. I would like to reiterate those concerns and also touch on some of the points you've raised in your invitation to testify before the committee. Although I cannot say we support S. 484, neither have we opposed it. As we have stated previously, there are worthwhile objectives in the bill and some interesting methods of achieving them. I feel no hesitation in this regard because our members within the CVP have been working, albeit without much recognition, since the middle of the last decade, perhaps arguably long before that to address concerns raised relating to fish and wildlife. Our members worked for the passage of the coordinated operations agreement and for adoption in the state legislature of the bill that laid the ground work for the upper Sacramento River plan. Those are two major programs of relevance to this hearing, but there are others we can mention such as the Suisun Marsh restoration legislation. Similar approaches are being taken to improve San Joaquin River habitat.

Of particular concern to us is the provision in S. 484 regarding limitation on long-term contracting. The impact to water users themselves, not to mention third parties, cannot be over emphasized when the reliability of long term water supplies disappear. Limiting contract length, by itself, has little effect on augmenting supplies for environmental purposes or to meet urban short-falls. However, it does have an enormous effect on the ability to make any kind of long-term investment in the land, including higher technology water conservation. We are as unwilling to accept those kinds of requirements as Governor Wilson seems to be as reflected in his previous statements to this committee.

It would also appear that the Reclamation Reform Act Amendments of 1986 provide for consideration of many of the concerns in S. 484. If the purpose of limiting contracts is economic or the setting of water rates, that is provided for in the coordinated operations agreement. If reallocation of the water supply for environmental purposes is the motive, the state water resources control board already has the authority to review a water right for beneficial use and the federal government has no need to intervene. Clearly, there is no additional direct or indirect benefit to the environment from more frequent contract renewals but there would be substantial detriment to those who use Central Valley Project water.

Water transfers play a pivotal role in S. 484. Voluntary transfers can and should be a part of the state's plan for meeting future demands. In the association's view, the question is not whether transfers will occur, but under what conditions. Under the bill, the Secretary is authorized to make water available to urban users. Like our concern for contract limitations, we must carefully examine the impacts of shifting that amount of water out of agriculture, presumably in a critically dry or water short period, will have on local economies. I realize you've advanced the idea that some sort of economic aid or payment in lieu be made to those communities that suffer because of the impact of the measure. But it isn't realistic to expect communities like Orange Cove, Firebaugh, Biggs, or Willis to be kept alive by large welfare payments, nor is it realistic to expect that people should give up this livelihood based on CVP water supplies to put their fate in the hands of congressional appropriations.

It is important to point out that agriculture already must, under federal law, state law and water contracts, give up substantial amounts of water when shortages threaten urban areas as was the case this year. To expect agriculture to give up even greater amounts of water other than on a short-term emergency basis could jeopardize one of California's major economies.

While the association supports voluntary transfers, it cannot support transfers that do not recognize existing short- or long-term contracts or existing water rights.

Involuntary transfers from water users who are putting their supplies to a beneficial use to another user cannot be justified. We try to teach our children that being the biggest kid on the block does not entitle you to the other kid's lunch money. It must be remembered that most of the CVP's water is not a right held by the federal government but by water districts and individuals. To that extent, the state has the authority to define and determine reasonable and beneficial use.

Nor can the association support individuals, who do not have individual contracts with the bureau, within a contracting district or agency to make separate arrangements to transfer water out of a district or agency service area. This could greatly impair a district or agency's ability and responsibility to meet demands within the district first. In fact, this method could frustrate efforts to transfer water rather than assist.

We also believe that what amounts to a tax or surcharge on the transfer as proposed in S. 484 would be a significant disincentive for some transfers. Clearly, only agencies who have the financial means to withstand the market price plus the surcharge will be able to participate in such transfers. That often puts large urban agencies at a distinct advantage over rural municipal water agencies and irrigation districts. As it is, many agencies could not afford water from the state's water bank this year even though the price was fixed by the state to prevent profiteering.

The combination of water transfers based on free market approaches and a lack of long-term contracts sets the stage for destabilizing the state's water system. Ironically, the environment stands to gain very little in that kind of arrangement. And, the impacts to third parties remain unaddressed if large scale transfers do occur on a wide-spread, permanent basis.

It was recently suggested that the CVP should be operated for the same purposes as the state water project (SWP). Frankly, it is and has been. The coordinated operations agreement made the CVP responsible for the first time for meeting delta standards and other environmental purposes as is the state water project. The CVP is now being used to assist with the winter run chinook salmon runs. There simply is not enough water to provide protection for all water related challenges whether CVP related or not as suggested in S. 484.

The issue should be more about fixing problems, not in fixing responsibility. Certainly there are several ways in which to approach any problem with the purpose of fixing it. Mr. Chairman, you have stated that your goal is to have the CVP fix the damages that it has caused and that once that has happened then others should be asked to do their part. Much of the original habitat that once defined the Central Valley differently was gone before the first bucket of federal cement was poured. It is not acceptable, therefore, to simply say that whatever losses have occurred in the CVP service area are the responsibility of the CVP. The bill as it is now written, goes far beyond mitigation of damages to now encompass enhancement. For mitigation to become relevant, you must know what was lost due to the projects existence; then set the mitigation requirements. For enhancement to be fair, it should not be born by the water users unless it is agreed to. Finally, it is important to remember that the CVP would not have been built, but for the support of a majority in Congress and a majority of the people of California.

Mr. Chairman, focusing on who is responsible is counter-productive. We need to begin action quickly. In fact, I strongly believe that it will only serve to divide the state further if we fail to focus on solutions rather than trying to fix blame. A very real effect could be decades in court because both sides have enough strength to stop things, but not enough to make things happen and to do otherwise only continues the political stalemate that is largely responsible for where we are today. S. 484 tries to do more than just create harmony between the SWP and CVP, it goes to the heart of water reallocation without state approval. As we said in our letter to you, the bill mixes the apples and oranges of water reallocation with the fixing of environmental problems.

It is important that you have recognized the Upper Sacramento River plan as proposed by the state legislature as being a workable option for solving some environmental needs on the Sacramento River. I believe that such a plan is necessary to avoid long contentious debates that waste precious time. The success of the Upper Sacramento River plan is how the legislature approached the problem. It laid blame aside as an unproductive and worn out tool and picked up the new implements of consensus and compromise. The net effect was to identify the problem, determine a mutually inclusive solution and share the costs appropriately. This kind of plan can work successfully on the entire Central Valley if it is given a chance. If we are really interested in going about the business of restoring fish and wildlife resources this kind of approach is necessary.

Mr. Chairman, a segment of the water community has shown its commitment to improving those environmental resources in the most tangible way. Recently a draft proposal by the Central Valley Project water association has been circulated for review that addresses specific problems with specific solutions for across the board restoration of the fish and wildlife resources damaged as a result of the CVP. In essence, it says here are the problems—here are the solutions; are we serious about fixing them or are we willing to argue more? I am advised that this proposal is not yet complete and is still evolving. But what is there is solid work along with the proposal.

Mr. Chairman, your concern for the resources of this state is appreciated and we ask that you give serious consideration to this alternative proposal. Fish and wildlife habitat restoration in the Central Valley will be a momentous task and we ask you to work with us on this proposal to get the job done.

Senator **Bradley**. Thank you very much.

Mr. Schuster.

STATEMENT OF DAVID SCHUSTER, STATE WATER CONTRACTORS ASSOCIATION

Mr. **Schuster**. Thank you, Mr. Chairman and Senators Burns and Seymour, for this opportunity to speak to your subcommittee. I have to apologize, I did not provide a written statement. I did not actually receive notice that I was going to be asked to testify, so I was not sure until this morning, but at least that is one testimony you will not have to read.

Senator **Bradley**. Well, then we knew more than you because we had you on our list a couple of days ago.

Mr. **Schuster**. First of all, I need to explain why the State Water Contractors, an organization that represents public agencies that buy water from the California State water project, is so interested in a bill that basically affects the Federal Central Valley Project.

That comes from the policy change, policy belief of the Contractors which we established in mid 1980's, the continuing conflict between water interests and environmental interests has led to at best, has been at best nonproductive. The result is a stalemate because nobody can get enough power to roll the other guy, the resultant stalemate has had some dire circumstances. We are looking at striped bass populations, for example, are 70 percent less than they were when I started working in water. Hopefully there is no direct correlation.

No. 2, the salmon population has been relatively stable, but only through the hatchery production of fall run salmon. The naturally produced salmon population is drastically down, listing winter run salmon as a threatened species been a good example.

And there has been a virtual halt to any kind of development of additional water need to meet ever increasing urban water needs and to protect the reliability of existing agricultural supplies.

We decided it is time to quit fighting, let us find some way to develop water or augment the existing water supplies, change project operations to be able to meet the environmental needs which are legitimate and the ag and water needs as well.

That policy changed, we were one of the fighters for a long time, and still will protect our interest, has led to some success, in our participation, some successes which Mr. Wheeler talked about.

We are concerned, in fact we strongly believe that S. 484, if passed, would actually push us back into that era of continuing battles with the environmental groups and others. This bill basically gives one group, the environmentalists, a leg up on the ongoing battles that would very likely stop, if not at least slow down, to the ongoing negotiations we now have going with different environmental interests and with the ag users and urban users.

It does that by establishing vague, nonspecific, and sometimes conflicting policies in fish and wildlife restoration that Secretary is supposed to implement. Then allow citizens groups to ensure compliance with those unclear directives, which we believe eventually will lead to the State of California and executive branch of the Federal Government having no real role any longer in the allocation and use of CVP water, and that process being transferred to the Federal courts.

We are afraid, in fact we are convinced that that will stop some of the cooperative things that are happening now finally in California to try to settle environmental water needs.

We believe it will lead to uncertainty and everybody sitting around waiting to see who wins the latest battle, which is not productive.

The contractors ask me, because we do agree with some of the public statements Senator Bradley has made and Senator Cranston made this morning, that the Federal Government does need to get involved in helping California solve some of the environmental water supply issues here. They do not, like sit apart and sort of watch us wrestle by ourselves in this process, which has been happening the last number of years.

There are a number of effects or impacts the Central Valley Project has had on fish and wildlife that have never been mitigated and should be mitigated. So as I say, contractors are supportive of that effort.

For that reason I was directed to get involved with the Federal and water contractors and others to see if we can come up with an alternative process to attain the goals Senator Bradley has stated that he is after, the environmental goals. That has led to initial draft of a bill that we have come up with in the last week and a half, which we believe establishes a number of things that need to be implemented, that could be implemented if this bill was passed instantly. Issues that have biological actions——

Senator **Bradley**. Mr. Schuster, your time is up, but because you are outlining something that I am sure has some importance to those who will follow, take an additional minute or 2 so you can get it out.

Mr. **Schuster**. I am almost done. The bill establishes actions and requires a completion of those actions that experts, such as Fish and Game, and provide immediate benefits for fisheries.

Also sets up a joint State and Federal process. If you look at the more difficult issues where there is either nonagreement among biologists in terms of having mitigated, but more importantly pertaining to Senator Burns' questions earlier, issues that are going to take lots of water to basically resolve environmental issues such as higher flows out of the Delta, flows that under the existing water system are not available unless you take them away from some other user of that water.

We believe there are ways to change the system and augment the supplies to get around that. Tried to set up a process which we are willing to negotiate with, of course, but with the Federal Government as well as the State, move towards a resolution of those issues.

Again, as Senator Burns said earlier, it establishes clearly the responsibility of the Federal contractors to mitigate the impacts, and also equally totally, we hope, the responsibility of others to how those would be mitigated, but not by the CVP.

Finally, Jean Auer said that with this bill that we hope to or I hope to be able to get a better seat at the table. Actually I would like to get any seat at the table, and sit down and talk with Senator Bradley and his staff and others and see if we can come to agreement on something along this line. We are not locked into our exact words.

And finally, in summary, I would like to ask Senator Bradley and others, that—one sided, in essence is going to slow us down, but instead the use of power of your position to prod, urge, force if necessary, all the parties to try to come up with a comprehensive program to solve problems in California. It is time. We have been messing around for 25 years, I think that things are so bad right now for all interests, that I think people are willing to do that.

Thank you.

Senator **Bradley**. Thank you very much, Mr. Schuster, and let me thank the whole panel.

Let me say on the last point, Mr. Schuster, if I could, that I welcome your contribution and I will read carefully the proposal that has been offered and put on the table by the contractors.

Mr. **Schuster**. Yes, sir.

Senator **Bradley**. And again, we all want to head in the same direction; that is we want a minimum impact on economic interests related to farming. We do not want to have Federal involvement. And the last thing we want to do is have the courts involved.

We are prepared to move as clearly and as decisively as possible to achieve those objectives. And we are simply looking for ways to make sure that there is adequate water.

So what I will be looking for in the proposals is how much water will be produced by the proposals that are put on the table by whomever in what period of time.

And that is the real question that I think that we have to begin to answer. So I will look at the proposals with that interest.

Do you have any comment?

Mr. **Schuster**. Just one. I think the latter point is the key one, where is the water going to come from. And it is almost impossible to make this in significant quantities. So we are not talking about hundreds of thousands of acre-feet, we are probably talking about productions, deliveries, existing system over a million acre-feet to 2 million acre-feet. We all need to sit down and figure out how we are going to get that water in ways that are environmentally sound as well as water supplies.

Now, I think we can do it. We have got to do that together, not by taking water away from one entity or the other.

Senator **Bradley**. Thank you very much. I do not disagree with that. In ways also that can provide some certainty of supply for the agricultural sector and the municipal and industrial sector. And in ways we have certainty of supply for environmental mitigation.

Mr. **Schuster**. Right.

Senator **Bradley**. Thank you very much.

Senator **Burns**. I have—no? Got slam-dunked again.

Senator **Bradley**. I want to thank my ranking member for his forbearance because we do want to hear from the next panel.

This is panel six: Ron Vickery, president of Tehama-Colusa; Dan Nelson, manager, San Luis Water District; Dick Schafer, Mid-Valley; Robert Stanfield, Madera; Steve Hall, Land Preservation Association; Audrey Raterman, Central Valley Project Chapter, California Women for Agriculture; Barry Brown, irrigation engineer; Steve Felte, general manager Calaveras County Water District.

Let me welcome everyone to the committee. If you can, I understand we are supposed to be out of here by 1, but we are going, hopefully we can get through this panel, and I want to give you the time, so I am prepared to occupy this room until the Ways and Means come in and evict us.

Senator **Seymour**. You are big enough to do that, Mr. Chairman.

Senator **Bradley**. Well, with your knowledge and my size, we will do——

Senator **Burns**. I will referee.

[Laughter.]

Senator **Bradley**. Let me welcome you to the subcommittee and let me also, what you can, in addition to the questions that I asked, and I think this panel it is particularly important to address one of the issues that has been raised by a number of panelists during the morning, and that is what is or could be dislocation on agriculture if we look at S. 484.

And it is important to keep in mind that Central Valley Water Project has about 20 percent of the water and that as S. 484 is now written, that the set-aside for fish and wildlife would be 20 percent of that 20 percent. So that the maximum amount of water that we are talking about being set aside for fish and wildlife is 4 percent of the State's water.

And the question is, how much can we get through conservation and through retirement of land that already has considerable problems. That would be my interest, in addition to the ones that you have.

STATEMENT OF RONALD VICKERY, PRESIDENT, TEHAMA-COLUSA WATER USERS ASSOCIATION, WILLOWS, CA

Mr. **Vickery**. Mr. Chairman, I am Ron Vickery and I know there has been a distinct interest in the CVP Association proposed bill and our association is also a member of that, and their representative is way on the bottom. If it is all right, I would like to defer my time at this time to Mr. Somach.

[The prepared statement of Mr. Vickery follows:]

Prepared Statement of Ronald Vickery, President, Tehama-Colusa Water Users Association, Willows, CA

Mr. Chairman, and members of the Committee, I am Ronald Vickery, President of the Tehama-Colusa Water Users Association, and I am also a farmer in the Northern Sacramento Valley. My remarks today supplement the written statement we submitted to the Subcommittee on May 8th in Washington.

We have reviewed the Chairman's opening statement delivered on May 8th, and five possible amendments arising from that address. I will comment on a couple of those which we can. First let me say, however, that by directing myself at them, we are not suggesting that the other problems with S. 484 no longer exist. They do, and the possible amendments go only a short part of the distance in fixing this legislation.

We wholeheartedly support authorization of responsible increases in CVP project water supplies. A key problem with California's water supply is that there are increasing demands on a fixed supply. This is a fact of life here which no Congressional enactment can change, no matter how well-intentioned, without turning your backs on thousands of people like me who have relied on your promises for decades. Simply sang "That was then, this is now" is irresponsible and unworthy of our government.

On numerous occasions we have called for implementation of the Upper Sacramento River Management Plan. But simply incorporating it here is not enough. As we pointed out in our written comments, S. 484 is so broad that it risks sinking again under its own weight, like its predecessor last year. Then we will have lost another year in our efforts to improve conditions on the Sacramento River. We cannot do everything at once, and those who continually suggest that, must accept responsibility for impeding our progress.

We suggest that the Committee should also consider an amendment which would clearly state that the Secretary must operate the Project, and provide water supplies with specific regard for area of origin rights. Presently the Bureau acknowledges historic statements of recognition of area of origin rights, but in practice ignores the priority intended in these state laws. This year again our Association includes member districts which are not receiving equitable treatment in the Bureau's allocation of water supplies. But we believe that a simple blanket statement that the Secretary must observe California water law will be too general. In fact this Bill's provision for sale of 100,000 acre-feet to the highest bidder will also bury area of origin protections. There must be legislative recognition that water cannot be exported from the Sacramento Valley until the reasonable and identified needs of contractors in our area are fully met.

Recognition of these rights however must be coupled with a responsible water contracting effort. Reducing the term of water contracts, and prohibiting contracting the remaining Project yield until the Bay-Delta proceedings are completed, or the legislated goals in S. 484 are met is senseless and damaging.

This loss of a key raw material in our most important industry will ripple through our economy. The people who will be hurt the most are the wage earners hired by farmers and the businesses that support them. These are the people at the lower end of the economic scale. And the effects of S. 484 will reach beyond them, into the hospitals, school districts and libraries of our communities. Some of our counties presently have an unemployment rate of 25%, the highest in the State. At a time of year when such rates should normally drop, as farmers begin seasonal hiring, the effects of the drought are clear. But S. 484 will legislate a drought that will continue indefinitely.

Additionally, proposing these contracting impairments suggests that Congress did not understand, or engaged in an idle act, when in 1985 it approved the Coordinated Operations Agreement, which requires that the Project be operated in accordance with properly-established Delta standards. Congress recognized that there would and could be long-term contracts entered into after that legislation. That in fact was one of the purposes of the COA—to clear the path for that, and Congress addressed specific provisions which should appear in such agreements. Now destroying the reliability of our water supply, and with it our communities' livelihoods is unnecessary. Furthermore, S. 484 is deficient in that it ignores the loss of value represented in the change in water contracting. There will be quantifiable losses in Project repayment, and there should also be provisions for adjustment in our capital obligations equivalent to that lost value for us farmers. If we are denied that, then we ask the Committee to explain why that is a fair and appropriate way to treat people who have entered into agreements with the United States in good faith.

Thank you for this opportunity to address you on these issues which are so critical to those of us who actually live in the Central Valley.

Senator **Bradley**. Absolutely.

Mr. Somach.

STATEMENT OF STUART L. SOMACH, ON BEHALF OF THE CENTRAL VALLEY PROJECT WATER ASSOCIATION, SACRAMENTO, CA

Mr. Somach. Thank you, Mr. Chairman.

Senator Bradley. Would you state your name?

Mr. Somach. My name is Stuart Somach; I am representing the Central Valley Project Water Association. And, as noted, I am on the list but down at the bottom there.

There was some concern raised given the fact that we have spent a great deal of time attempting to address the environmental issues that are raised within the legislation in a meaningful way, and given the fact that the impact of S. 484 as it is currently configured would directly be borne by the Central Valley Project Contractors, an association that I represent, in fact, represents most if not all of the Central Valley Project water contractors in the State of California.

Mr. Schuster who, in conjunction with the State water contractors as well as the Central Valley Project water contractors, developed this alternative piece of legislation.

What we attempted to do in developing the legislation was to, or the proposal, was to take a look at all of the environmental issues that were of concern.

In fact what we did was we started at the very top of the system and moved down through the system and attempted to identify, looking at every source that we could, what the various environmental problems were associated with the Central Valley Project as well as with general environmental questions within the Central Valley, itself.

We excluded from that only those areas dealing with the Delta and rationale for that were twofold: No. 1, those issues are currently being dealt with by the State Water Resources Control Board in that process, a process in which the Federal Government is subject to. And No. 2, those issues to the extent that we dealt with them, and we did deal with them, we dealt with them on a longer-term basis.

The proposal, itself, is attached in its entirety to my testimony. I do not think it has been submitted, although we have already provided your staff with copies as soon as it was done. The testimony, itself, is submitted in its entirety, I mean the proposal, with my testimony.

In essence the bill divides the questions, the environmental questions that have been identified, into three major parts. Those parts are certain identified actions that must be accomplished immediately. In fact, there is a date of 1985 by which time those actions must be completed, 1995 on which those dates must be completed.

There is a second category of environmental questions that have been identified within the legislation proposal, and those are things where we know what the problem is, but there is a range of potential alternatives and those alternatives are discussed and the commission, which is also established within this bill, a joint State and Federal Commission is charged with the task of attempting to come up with the most feasible alternatives based upon criteria that are established within the proposal.

The third aspect are those areas where we know there is a problem but at this point we are not sure of the dimension of the problem or what the appropriate solutions are. There the commission is charged with identifying the problem and coming up with implementation solutions by date certain to submit to Congress for authorization for implementation.

With respect to allocation of the responsibility, as noted in this context, CVP contractors have not at all walked away from the notion that they ought to be able to, and ought to contribute to mitigating their harm caused by the operation of the Central Valley Project associated with water and power operations.

And so as a consequence those things that the commission determined are due to CVP water and power operations will be paid for by the Central Valley Project water users themselves.

The second category would be a category where there is a joint contribution in terms of obligation wherein the Central Valley Project is part of the problem, so to speak. And there is an allocation of costs. The Central Valley Project water contractors would, in fact, also contribute.

The third aspect, and that is those areas that are pure enhancement, and those are deemed to be nonreimbursable functions that would be shared by the Federal Government and the State government, based upon a formula contained within it.

What the proposal does not have is anything beyond those environmental concerns. We strongly believe that these motives to those are social policy type of issues that the previous panel talked about. While they are important, while they need to be addressed, we believe they ought to be addressed not encumbered by the argument of environmental degradation, but the environmental problems ought to be fixed, they ought to be addressed, they ought to be separated from these other issues and allow these other issues to be dealt with on a playing field of their own.

I note my time is up.

[The prepared statement of Mr. Somach follows:]

PREPARED STATEMENT OF STUART L. SOMACH, ON BEHALF OF THE CENTRAL VALLEY PROJECT WATER ASSOCIATION, SACRAMENTO, CA

Representatives of the Central Valley Project Water Association ("CVPWA") have twice before testified on Senate Bill 484 ("S. 484"). In that prior testimony, the CVPWA focused upon numerous features of the proposed legislation and has been fairly critical of it. The CVPWA has noted that the legislation paints with a too broad a brush, attempting to cure every real and imagined problem associated with the Central Valley Project ("CVP") through programs and policies which are, in large part, illusory in nature. While the legislation establishes environmental and social goals, the only real implementation measures contained in the bill are the broad citizen suit provisions which will allow any and all dissatisfied parties to litigate their pet issues and, as a consequence, force the CVP to be operated through judicial fiat. As I indicated, other CVPWA representatives have already spent a lot of time dealing with these criticisms of the bill and, accordingly, there is no need for me to repeat what has already been said.

Representatives of the CVPWA have also candidly admitted that certain real environmental problems associated with the CVP and its operation, as well as the operation of other water projects and land practices near the Sacramento and San Joaquin rivers, exist. The CVPWA has, for some time, argued that if legislation is needed, it should be focused on fixing real problems regardless of their cause. Merely preaching what should be done, however, has not proven to be a particularly productive undertaking. Either our apparently meager powers of persuasion have not been adequate to move our listeners to action, or our sermon has been perceived as false and disingenuous and consequently disregarded. Failing to persuade others to act in a manner aimed at achieving real environmental protection, we have ourselves acted to develop the type of legislation that we believe this committee should be considering and pursuing as a means of addressing the real and substantial problems that face all of us in California.

I note that while the CVPWA has played a significant role in developing the proposal that I will be discussing, others have played a key role in its development. In particular, the State Water Project contractors have equally participated in the development of the draft language of our proposal. Moreover, we have consulted with the California Department of Fish and Game, and various fish and wildlife groups to insure that our proposal meets their needs and addresses the environmental issues in a manner which provides these groups with assurances that what is being proposed really addresses and can be a means to solve many of the identified fish and wildlife problems that exist within the Sacramento and San Joaquin River systems.

I also note that the proposal is still in draft form. The CVPWA and State Water Contractors welcome open and constructive suggestions that will further enhance common objectives of environmental protection, restoration and enhancement. The CVPWA and State Water Contractors have no pride-of-authorship which can get in the way of the improvement of the proposal. The CVPWA and State Water Contractors do have a pride-of-principle which should help to steer a clear and straight course to insure the continued constructive and measured nature of the programs set forth in the proposal.

The proposal itself is fairly easy to describe. The reason for that, I believe, is because the proposal is very straightforward. The purpose of the proposal is threefold. First, the proposal seeks to protect, restore and enhance fish and wildlife habitat in the Central Valley of California. Second, the proposal provides for the full mitigation of the impacts of the CVP on fish and wildlife habitat. Third, the proposal establishes a joint state and federal commission to identify, develop and implement measures that will provide cost effective protection, restoration and enhancement of fish and wildlife habitat and resources in the Central Valley of California.

The proposal then addresses the task of environmental protection by dividing areas of concern into three categories and directing the Commission to address each of these categories in turn in order to provide full environmental protection to the Central Valley. The areas of concern are articulated as follows:

First, the Commission, acting through the appropriate state or federal agencies, must implement, no later than December 31, 1995, nine actions that have previously been identified as crucial to habitat protection and restoration in the Central Valley. As noted, these actions have previously been identified and there appears to be no dispute that they should be undertaken without further delay. Indeed, most of these actions should be completed well before that date. These actions include the following:

(1) The negotiation and execution of an agreement with the California Department of Fish and Game which, when implemented, will fully mitigate the fishery losses associated with the direct losses of Tracy Pumping Plant operations.

(2) The negotiation and execution of an agreement with the California Department of Fish and Game which, when implemented, will mitigate for direct fishery losses associated with the operations of the Contra Costa Canal Pumping Plant No. 1.

(3) The development and implementation of a plan to allow selection of the elevation from which water is released from Shasta Reservoir for the purposes of temperature and turbidity control.

(4) The rehabilitation and expansion of the Coleman National Fish Hatchery and the transfer of operation of the hatchery to the California Department of Fish and Game.

(5) The negotiation and execution of an agreement with the California Department of Fish and Game which, when implemented, will address problems associated with the stranding of young salmon and steelhead caused by flow release changes from Keswick, Nimbus, and Lewiston Regulating reservoirs.

(6) The development and implementation of an upper Sacramento River gravel replenishment and rehabilitation program for the purpose of replenishing, on a continuous basis, gravel lost due to the construction of Shasta Dam, bank protection programs, and other actions that have reduced the availability of gravel.

(7) The development and implementation of a Delta Cross Channel closure program for the purpose of closing the Delta Cross Channel gates during times

when large numbers of striped bass eggs and larvae approach the Sacramento River intake to the Delta Cross Channel.

(8) Delivery to Central Valley wildlife refuges of dependable water supplies of suitable quality in accordance with historic Central Valley Project voluntary delivery practices.

(9) Establishment of a comprehensive assessment program to monitor fish and wildlife resources in the Central Valley and to assess the biological results of measures implemented pursuant to the proposal.

Second, the Commission, acting through the appropriate state or federal agencies, must develop, select and implement measures using criteria established within the proposal that resolve listed fish and wildlife habitat problems. The criteria within the proposal is described as follows:

(1) Natural production actions shall be given priority over artificial production actions. Artificial actions shall be selected only when there are no natural production alternatives available or to enhance natural production programs.

(2) Priority will be given to alternatives that have the highest biological probability of achieving the desired objective.

(3) Alternatives that provide a greater magnitude of potential benefits shall be given priority over alternatives which have a lesser magnitude of potential benefit.

(4) Alternatives which are determined to be most cost effective, measured in economic terms considering impacts on California's developed water and power resources and related industries, shall be given priority over all other alternatives.

The listed fish and wildlife problems that shall be addressed by the Commission are as follows:

(1) When Keswick Dam releases are reduced in April when the Anderson-Cottonwood Irrigation District Diversion Dam is put into operation, and again in November when it is taken out of operation, winter run and other salmon fry and juveniles are stranded and killed. Additionally, due to that facility and its operation, upstream migrating adult salmon have difficulty passing that structure because of a lack of adequate ladder attraction flows. Alternative actions for eliminating these problems shall be evaluated and the selected alternative implemented.

(2) Passage problems for both adult and juvenile salmonids at the Central Valley Project Red Bluff Diversion Dam shall be evaluated and alternative actions for eliminating these problems selected and implemented.

(3) Unquantified but significant losses of juvenile anadromous fish occur due to unscreened or inadequately screened diversions on the Sacramento and San Joaquin rivers, their tributaries, and in the Sacramento-San Joaquin Delta. Measures such as construction of screens on unscreened diversions, rehabilitation of existing screens, replacement of existing non-functioning screens, and relocation of diversions to less fishery-sensitive areas shall be evaluated and, in cooperation with the California Department of Fish and Game, a screening program shall be implemented.

(4) Salmon and steelhead population levels in the San Joaquin River system have dropped to levels that may be too low to sustain the base populations needed to allow adequate natural production. An augmentation program of artificial production shall be undertaken. This program shall only be undertaken for the purpose of enhancing natural production in above normal water years.

(5) In order to provide the mitigation for Shasta Dam's impacts on the fishery resource, the Coleman National Fish Hatchery shall be augmented by the construction and operation of a new satellite hatchery at a suitable location. This new hatchery and the Coleman National Fish Hatchery shall be operated by the California Department of Fish and Game under contract with the Secretary.

(6) In order to realize the full potential of salmon and steelhead natural production in the Yuba River, a salmon and steelhead hatchery shall be constructed and operated by the California Department of Fish and Game, under contract with the Secretary. This hatchery shall assist in maintaining the existing runs of salmon and steelhead and create enhancement potential for natural production in above normal water years.

(7) Barriers to upstream migration of adult salmon and steelhead adults caused by agriculture diversions and other obstructions in tributaries to the Sacramento and in the San Joaquin river systems reduce the natural production of these species and shall be eliminated. Removal programs or programs for the construction of new fish ladders shall be considered and implemented.

(8) Current minimum fishery release requirements for Keswick and Nimbus dams are too low to sustain a healthy population of naturally produced salmon and steelhead in the lower American River and in the upper Sacramento River. The Commission shall develop and undertake instream flow studies needed to determine new minimum flow requirements in the lower American River and in the upper Sacramento River. These flow studies shall focus only on the minimum instream flow needs for the respective river sections and be completed no later than December 31, 1992. The minimum flow releases developed by the Secretary, based upon the determinations of the Commission, shall be implemented on these river stretches. Implementation of these minimum flows shall be in cooperation with the California Department of Fish and Game and coordinated with the California State Water Resources Control Board. The Secretary is authorized to assist in the funding of biological studies, in cooperation with the California Department of Fish and Game and the California State Water Resources Control Board, focused upon the implementation of measures on these river stretches to further enhance instream resources. The Secretary is authorized to implement measures for the further enhancement of the instream measures on these river stretches, provided, however, that the Secretary first determines (i) the level of additional benefit that will be conferred through implementation of these measures, (ii) the impact that these measures will have on Central Valley Project water and power delivery capabilities, and (iii) that the enhancement benefit gained through implementation of these enhancement actions will outweigh adverse impacts on Central Valley Project water and power delivery capabilities. Enhancement provided on the lower American River shall become credits to be provided Central Valley Project water and power contractors to offset costs associated with the mitigation cost allocations established in Section 4(f)(1).

(9) Intermittent releases of lethal concentrations of dissolved metals from Spring Creek Debris Dam pose a serious problem in the upper Sacramento River. Efforts by the Environmental Protection Agency and others to clean up the mines generating this material shall be expedited, and the Environmental Protection Agency shall, no later than December 31, 1993, alone or in conjunction with state or local governments or agencies, construct facilities to control and eliminate these toxic discharges. In the interim, the Secretary shall provide water from Keswick Dam sufficient to dilute the Spring Creek Debris Dam discharges except when the United States Corps of Engineers' flood control criteria for Shasta Dam limit that capability.

(10) Flows in Battle and Clear Creeks are insufficient to provide adequate conditions for spawning and rearing of salmon and steelhead. Flows shall be provided by the Secretary from Whiskeytown Dam as determined by instream flow studies conducted by the California Department of Fish and Game after the Clear Creek main channel has been restored and a new fish ladder has been constructed at the McCormick-Saeltzer Dam. Adequate flows for Battle Creek as determined by instream flow studies conducted by the California Department of Fish and Game shall be provided by requesting the Federal Energy Regulatory Commission to modify existing power licenses on that creek.

(11) The Central Valley Project and State Water Project pumping plants in the south Sacramento-San Joaquin Delta decrease the survival of young salmon that are diverted from the San Joaquin River to the pumps. Partial mitigation can be provided by construction of a barrier at the head of Old River or by construction of three barriers in the South Sacramento-San Joaquin Delta in Old River near the Tracy Pumping Plant, in Grant Line Canal, and in Middle River south of the confluence of Middle River and Woodward Cut. The three barrier alternative would be operated to minimize diversion of San Joaquin River water and therefore salmon young into Old River and to provide water quality and water level benefits to the agriculture water users in the South Sacramento-San Joaquin River Delta.

(12) The illegal taking (poaching) of striped bass from the San Francisco Bay/Sacramento-San Joaquin Delta Estuary significantly reduces the striped bass population. Enforcement measures shall be developed and implemented through appropriate agencies of the United States, in cooperation with the State of California.

(13) The number of eggs laid each year by striped bass females may be insufficient to maintain a viable reproducing striped bass population. The Secretary, based upon the determinations of the Commission, shall consider development of fishing regulations that will protect the older more productive striped bass

females. Fishing requirements developed by the Commission shall be implemented in cooperation with the State of California.

(14) Measures shall be developed that will provide the dependable water supplies of suitable quality and associated refuge facilities needed to permit full habitat development on each refuge and the water provided shall be no less than the "level 4" quantities and deliveries identified in the Dependable Water Supply Needs table in the Refuge Water Supply Report.

Third, as is probably obvious, the measures outlined above will be expensive. The cost provisions of the proposal attempt to fairly allocate costs. Cost payment or repayment is broken down into three categories.

First, costs determined by the Commission to be solely attributable to the CVP, that is, CVP mitigation, shall be paid for by the CVP water and power contractors.

Second, costs which are attributable to the CVP in combination with others shall be allocated 37.5% to the CVP water and power contractors, 37.5% as a federal non-reimbursable expenditure, and 25% reimbursable by the State of California.

Third, costs of any mitigation action not associated with the effects of the CVP water and power operations which enhance the fish and wildlife habitat shall be allocated 75% as a non-reimbursable federal expenditure and 25% to the State of California.

The Commission on Central Valley Fish and Wildlife Habitat Restoration is itself an important aspect of the proposal. The Commission is made up of 29 members appointed jointly by the Secretary of the Interior and the California Secretary of Resources. The Commission is given the role of identifying, developing and implementing measures that will provide cost effective protection, restoration and enhancement of fish and wildlife habitat and resources in the Central Valley of California. The Commission's job will also entail a determination of which state or federal agency is best suited to undertake implementation measures identified as the most appropriate to address identified problems. These determinations shall be binding on the Secretary of the Interior.

I have, with the submission of written testimony, attached the current draft of the proposal. I assume that in the next few days and weeks the elements of the proposal will be refined by those interested. The proposal is the CVPWA's and others' attempt to address the issues raised by S. 484 in a constructive manner which will result in real environmental protection.

Senator **Bradley**. Thank you very much. Would any member at the table want to designate his time or—I do not think so. Okay, well, thank you very much.

Mr. **Somach**. I will be available for any questions.

Senator **Bradley**. Okay, why do you not take a seat at the table. Ron Vickery. Oh, you deferred your time.

Dan Nelson.

STATEMENT OF DANIEL NELSON, GENERAL MANAGER, SAN LUIS WATER DISTRICT, LOS BANOS, CA

Mr. **Nelson**. Mr. Chairman, Members of the subcommittee, I am Daniel Nelson, general manager of the San Luis Water District. And we appreciate being invited to appear before you to discuss S. 484.

Valley residents, CVP contractors and the water users have many concerns regarding S. 484, but my statement will focus on three of these concerns. That is the potential impact, economic impact on rural communities; the implications for irrigation district contract renewals; and necessary conditions for beneficial water transfers.

The San Luis Water District is included in one of the two areas identified by Daniel Summer, the Deputy Assistant Secretary for Economics, U.S. Department of Agriculture, in a prior hearing of this subcommittee as being the most severely impacted by this bill.

All of our residents and communities depend on agriculture and the CVP water which makes farming possible in the region. We are concerned that the bill does not address the economic impact of the Central Valley and the resulting economic hardships.

Both direct and indirect impacts on rural communities need to be fully understood when considering such drastic changes in the allocation of water within the region.

As well as the direct and the nondirect impacts, economic impacts, I think it is important to quantify the nonmarket values that agriculture holds.

One measure of these values is provided by the Federal, State and local legislation which protects and preserves agricultural land. The popularity and prevalence of purchasing development rights programs, use value assessment, and agricultural zoning laws in California and many Eastern States clearly demonstrate that the public is eager to preserve farmland and farming activities, even when the cost to the State and local taxpayers may be substantial .

In California the Williamson Act and the county level zoning decisions are good examples of this public sentiment. Many counties in the Central Valley implement zoning rules that protect agriculture even when faced with financially attractive development alternatives. The complete set of direct, third party and nonmarket values must be quantified.

On contract renewals, short-term contract renewals immediately remove a water district's ability to operate a delivery system efficiently and economically. And as an example, the San Luis Water District is currently proposing to repair or replace many of its older facilities. These improvements will greatly enhance the efficiency of water deliveries, but they cannot be completed without long-term financial commitments. Commitments that cannot be made with uncertain short-term water supplies.

And for these same reasons short-term contract renewals would also be counterproductive to on-farm water use efficiencies. Long-term investments are clearly not practical for farmers who are uncertain about the next year's water supply.

We understand increasing water demands place new responsibilities on the Central Valley Project and we are committed to updating and improving the facilities and operations to meet this challenge.

I would like to specifically address how the contract renewal issue would affect San Luis Water District. We currently have a supply that is about 2.1 acre-feet per acre when allocated throughout the district. We are a water-short district. We find ourselves out on the open market year after year to supplement that supply.

We cannot even consider the alternative of giving up 10 percent, 20 percent, whatever that is in order to get longer contract renewals. We cannot consider giving up any of our 2.1 acre-feet per acre allocation. We have permanent crops in the District that require more than the 2.1, and we have development that requires up above the 2.1.

I had some comments on price that I heard earlier, before. I will just keep those. Whoever is getting the 90-percent subsidies, I would like to talk to my Federal, my other Federal contractor friends, because we are not getting our fair share of that. We are paying for our full operations and maintenance. We are paying for the full capital expenditures that the Federal Government has made on these facilities. Granted they are interest-free, and I do not want to minimize that investment the Federal Government has made. On the other hand I think that that is an investment that has been paid back time and time again through the tax base and economic base that CVP's provided.

Senator **Bradley**. Do you want to wrap it up, if you could?

Mr. **Nelson**. Yes, sir. In summary, Mr. Chairman, S. 484 will cause much more harm to the farms, residents and communities of the Central Valley than the benefits it will provide to the public.

The hostile, coercive and punitive manner in which this bill attempts to achieve change is neither appropriate, necessary nor ultimately effective.

Thank you very much.

[The prepared statement of Mr. Nelson follows:]

PREPARED STATEMENT OF DANIEL NELSON, GENERAL MANAGER, SAN LUIS WATER DISTRICT, LOS BANOS, CA

Mr. Chairman, members of the Subcommittee, I am Daniel Nelson, General Manager of the San Luis Water District. We appreciate being invited to appear before you to discuss Senate Bill 484.

San Luis Water District (District) serves about 60,000 acres of farmland and a small—but growing—number of urban water users. The District is located on the westside of the San Joaquin Valley in Merced and Fresno Counties. We have a contract with the United States for water service through the Central Valley Project, and receive this water through the authority of the San Luis Unit.

CVP contractors and their water users have many concerns regarding S. 484. My statement will focus on three of these concerns:

1. The potential economic impacts on rural communities.
2. The implications for irrigation district contract renewals.
3. The implications for beneficial water transfers.

ECONOMIC IMPACTS ON RURAL COMMUNITIES

The San Luis Water District is included in one of the two areas identified by Daniel Sumner (Deputy Assistant Secretary for Economics, U.S. Department of Agriculture) in a prior hearing of this Subcommittee, as being the most severely impacted by this bill. All of our residents and communities depend on agriculture and the CVP water which makes farming possible in the region.

We are concerned that the bill does not address the economic impact on the Central Valley and the resulting economic hardships. Families in the Valley rely on a sound agricultural economy to survive. Presently, several counties in the Valley are among the highest in unemployment. Both direct and indirect impacts on the rural communities need to be fully understood when considering such drastic changes in the allocation of water within the region.

The non-market values of agriculture must also be measured, to fully understand all the values that the public derives from agriculture. One measure of these values is provided by the Federal, State, and local legislation which protects and preserves agricultural land. The popularity and prevalence of Purchasable Development Rights programs, use value assessment, and agricultural zoning laws in California and many eastern states clearly demonstrate that the public is eager to preserve farmland and farming activities, even when the cost to state and local taxpayers may be substantial.

In California, the Williamson Act and county-level zoning decisions are examples of this public sentiment. Many counties in the Central Valley implement zoning rules that protect agriculture, even when faced with financially attractive development alternatives. The complete set of direct, third-party, and non-market values must be quantified before we can adequately evaluate the "tradeoffs" involving the land-use changes that will result from the proposed re-allocation of water from agriculture.

CONTRACT RENEWALS

Short-term contract renewals immediately remove a water district's ability to operate a delivery system efficiently and economically. For example, the San Luis Water District is currently proposing to repair or replace many of its older facilities. These improvements will greatly enhance the efficiency of water deliveries, but they cannot be completed without long-term financial commitments—commitments that cannot be made with uncertain, short-term water supplies.

For the same reasons, short-term contract renewals would also be counter-productive to on-farm water use efficiencies. Long-term investments are clearly not practical for farmers who are uncertain about the next year's water supply. Short-term renewals would also provide disincentives for long-term leasing arrangements—arrangements that lead to a more responsible management of soils and water.

We understand that increasing water demands place new responsibilities on the Central Valley Project. We are committed to updating and improving our facilities and operations to meet this challenge. We are concerned that this bill takes away the very tools that Districts and farmers need to implement these changes.

TRANSFERS

The bill does not properly address the third-party effects of water transfers—both economic and hydrologic. A procedure for identifying and mitigating all third-party effects needs to be developed to sustain long-term economic viability of rural economies in the Valley, and prevent the potential creation of "Mono Lake-type" results. The language in Section 5(d)(3) attempts but does not adequately protect the existing secondary uses of water.

The 25-percent tax on proposed transfers is not a correct strategy if the goal is to maximize transfer opportunities. Opportunities for equitable long-term voluntary transfers are not as available nor as inexpensive to develop as this bill implies. An additional tax would discourage potential agreements.

ADDITIONAL AUTHORITIES

In Section 8(f)(1) the proposed reduction of unused contract water "by the amount of any avoided operation and maintenance costs" does not appropriately address the repayment issue involved in the USBR "use it or lose it" water policy. The lion's share of operation and maintenance costs are fixed and will not be significantly affected by reduced deliveries.

SUMMARY

In summary, Mr. Chairman, Senate Bill 484 will cause much more harm to the farmers, residents, and communities of the Central Valley than the benefits it will provide to the public. The hostile, coercive, and punitive manner in which this bill attempts to achieve change is neither appropriate, necessary, nor ultimately effective. Much of the testimony from federal, state, and local agencies describes effective ongoing studies, activities, and consensus efforts that make this bill unnecessary and, therefore, quite possibly counter-productive to the bill's own goals.

Increased demands on water resources, fueled by population growth and an increased awareness of environmental values, present formidable challenges to the operators and contractors of the Central Valley Project. We are already implementing many progressive programs to achieve an optimal balance among competing demands for water. Inappropriate changes in CVP operations and contracts will affect the lives of all families dependent on them, most notably within the Central Valley.

We must not overlook, or unnecessarily sacrifice, the many existing benefits and commitments of the CVP in our haste to improve the effectiveness of the CVP.

Thank you again, Mr. Chairman, for the opportunity to present our views. I am available at your convenience to respond to questions.

Senator **BRADLEY**. Thank you, Mr. Nelson.

Mr. Schafer with the Mid-Valley Water Authority.

STATEMENT OF DICK SCHAFER, MID-VALLEY WATER AUTHORITY, VISALIA, CA

Mr. **SCHAFER**. Thank you, Mr. Chairman, Members of the committee, it is a pleasure to be here. I represent agriculture.

The Mid-Valley Water Authority is a joint powers agency within six counties of the San Joaquin Valley and covers 3 million acres of irrigated agriculture.

We were formed many years ago for the express purpose of contracting with the United States for already existing yield of a project and for the construction of the conveyance of facilities to serve that area. Neither of which have been accomplished to date.

The purposes of S. 484 of expanding the authorized purposes of the CVP, altering the place of use, and establishing extensive conditions that must be satisfied before the unallocated CVP water may be placed under contract are in direct competition and conflict with the purposes of the Mid-Valley Water Authority and threatens the survival of California agriculture.

The San Joaquin Valley of California has a critical condition of groundwater overdraft, which is a far greater threat to the economy and the environment of the State and the wildlife habitat than S. 484 is designed to restore and protect.

The United States and the State of California have consistently, over the past 30 years, identified the overdraft in the San Joaquin Valley at in excess of a million acre-feet. And with the 5-year drought, it exceeds 10 million acre-feet for that term. The overdraft is critical. We have growers that are pumping from depths 100 feet greater than they were before the drought commenced 4½ years ago.

Protecting, restoring and enhancing the groundwater basins of the San Joaquin Valley should have equal priority with that of wildlife habitat as covered in S. 484.

Since 1960, 30 years ago, the United States has made commitments to supply the uncontracted yield of the CVP to the San Joaquin Valley, the very same water that S. 484 allocates to the wetlands and the highest bidder for MNI purposes. It is unfair and bad policy for the United States to renege on prior commitments, nor is it fair to the Congress to continually seek tapping the Central Valley Project for water to solve the fish and wildlife problems of the State of California.

In 1986 Congressman Miller sponsored H.R. 3113. That coordinated operations agreement approval with the United States could then execute Public Law 99-546, is legislation that was supported by the contractors on the premise that solved the fish and wildlife problems of the Central Valley Project. They were being mitigated by that particular bill.

Here we are 5 years later, and we are back again trying to tap the CVP again for water. The yield prior to coordinated operations agreement of the Central Valley Project was 9.25 million acre-feet. Subsequent to the implementation of 1485 and the coordinated operations agreement, the CVP yield is 8.3 million acre-feet. Nearly 1 million acre-feet was allocated out of the CVP under the past agreement to solve the very problems that this bill is now supporting.

We think that is unfair. It is just not right.

In June of last year the Bureau of Reclamation issued a report of the San Joaquin Valley conveyance investigation. That report provides a balanced supply of water and conveyance facilities for the wetlands and for the overdrafted drought water basin of the Central Valley.

It should be clear to this committee that the State of California does not have adequate developed water supply to satisfy all the needs of the State. New facilities must be constructed for the development of additional water.

Reassignment of existing yield will not solve the problems. There is a tremendous agricultural infrastructure in place that is providing $18 billion per year revenues to the economy of the State of California to the Nation. And it should not be abandoned in favor of wildlife habitat.

The Congress should take a fresh look at the importance of California's agriculture to the country's exports and balance of trade. We urge the Water and Power Committee to abandon their exclusive focus on fish and wildlife as set forth in S. 484, but rather address all the water needs of California. There is adequate water in California.

Senator Burns, for example, the north coast of California has 24 billion acre-feet of water rolling to the ocean. We talk about conservation in this State. That is where it should be conserved and distributed for the needs of all in California.

Thank you very much.

[The prepared statement of Mr. Schafer follows:]

PREPARED STATEMENT OF DICK SCHAFER, MID-VALLEY WATER AUTHORITY, VISALIA, CA

My name is Dick Schafer, and I appear today to present the views of the Mid-Valley Water Authority on S. 484. The Mid-Valley Water Authority (MVWA) was formed in December 1982 to obtain a supplemental supply of Central Valley Project (CVP) water to alleviate the continued ground water overdraft in the east side of the San Joaquin Valley. The Authority is composed of 25 political subdivisions which are located in Merced, Madera, Fresno, Kings, Tulare, and Kern Counties in California, covering more than 3 million acres of irrigated agriculture. The Authority has urged since its formation the allocation of the remaining CVP water and the staged implementation of the Mid-Valley Canal Project which would become integrated units of the Federal Central Valley Project.

The U.S. Bureau of Reclamation, Mid-Pacific Region issued in June, 1990 a "Report of the San Joaquin Valley Conveyance Investigation, California", after 6-years of preparation with the assistance of the State of California and the Mid-Valley Water Authority. The Report was initiated to determine a means of alleviating the ground water overdraft in the San Joaquin Valley. The Report proposes the allocation of 300,000 a.f. of firm water on a permanent basis and the allocation of 250,000 a.f. of intermittent water from the remaining CVP yield with delivery by staging the development of additional conveyance facilities.

The Authority has many of the same concerns with S. 484 that have been expressed by the Central Valley Project Water Association. These concerns include a decreased water supply for agriculture with consequential adverse economic impacts; undue burden of responsibility on CVP water and power users for repair of the fish and wildlife problems of the Central Valley, and a mandated rather than consensus-based approach to solving such problems.

The Authority is particularly concerned over the provisions of S. 484 that would severely impact the CVP water allocations and the staged development of conveyance facilities for relief of the ground water overdraft in the San Joaquin Valley.

The Authority does however recognize the need to develop real solutions to the decline of fish and wildlife resources of the Central Valley. The Bureau's June, 1990 Report, did include a proposal for the allocation of CVP water supply and the construction of facilities for wetland habitat in the Sacramento and San Joaquin Valleys.

It should be clear to the Committee that California does not have adequate developed firm water supply to satisfy the needs of the State. The 5-year drought has placed a severe strain and made it extremely clear that there is not sufficient developed water supply in the State of California. New facilities must be constructed for the development of 5-million acre-feet of additional firm yield. Reassignment of existing yield will not solve or provide adequate water for the needs of California.

The ground water overdraft within the San Joaquin Valley before the drought was bad, but now the situation is critical. The overdraft has increased from an average of one million acre-feet per year to more than 10 million acre-feet during the drought and the landowners in some districts are pumping ground water from depths more than 100 feet deeper than at the beginning of the drought.

For 30 years the United States has recognized the ground water overdraft problem in the San Joaquin and has made commitments and allocations of additional CVP water for alleviation thereof, but to date the United States has not placed the additional CVP water supply under contract. As early as May, 1960 by a report "East Side Division, Central Valley Project", the United States committed 1.3 million acre-feet of additional CVP water from existing permits to be diverted from the Delta for the east side of the valley. Subsequent reports of the United States in January, 1965; September, 1968; April, 1975 and January, 1981 allocated and committed additional CVP water, to the MVWA service area for alleviation of ground water overdraft.

As recent as May 15, 1987 in a hearing before the House Subcommittee on Water and Power Resources, called by Congressman Miller on H.R. 572, the United States Bureau of Reclamation's Regional Director, commenting on the San Joaquin Valley Conveyance Investigation, stated "The plan that appears most feasible at this stage of planning would initially provide 400,000 to 425,000 acre feet of supplemental water supply to the MVWA service area and thereby reduce the ground water overdraft by one-third."

The Authority is therefore particularly alarmed over the provisions of S. 484 that would place a moratorium on further contracting of any of the unallocated CVP surface supply until the fish and wildlife mitigation goals of the bill are achieved.

We do not think it is good policy or fair for the United States to back out of commitments nor for the Congress to continuously develop legislation that alters the water allocations of the Central Valley Project. During the enactment of the "Coordinated Operations Agreement", Public Law 99-546, October, 1986, the MVWA was advised that although the firm yield of the CVP would be reduced from 9.25 million acre-feet to 8.3 million acre-feet as a result of the Agreement, there would still remain 1.0 million acre-feet of firm supply available for allocation from the Project.

The Congress should instead seek alternatives for the development of sufficient water supplies to satisfy the needs of fish and wildlife, recreation, municipal and industrial and agriculture, rather than reallocating existing water supply and focusing exclusively on fish and wildlife needs.

There are livelihoods at stake, and a tremendous agricultural infrastructure in place which should not be abandoned in favor of wildlife habitat. Furthermore, there has to be a conscious recognition by the Congress of the importance of California agriculture for exports and balance of trade, and to the incredible social and economic disruption that would be caused by the proposed legislation.

We therefore urge that the best solution to the current water problems in California does not lie in an exclusive focus on fish and wildlife needs, but rather can only be achieved by an approach which simultaneously addresses the needs of fish and wildlife, M&I and agriculture.

The proposed Mid-Valley Canal Project offers that approach. In addition to supplying water desperately needed for the alleviation of ground water overdraft, the project would deliver water supplies to wetland habitats in the Sacramento and San Joaquin Valleys, and integrate wetland return flows with other CVP water supplies.

The Authority has asked the Congress to appropriate funds for fiscal 1992 for the U.S. Bureau of Reclamation to investigate an enlargement of the CVP's Delta Mendota Canal, and to study participation by the CVP in the California Department of Water Resources' proposed Los Banos Grandes Project. These projects would benefit the CVP generally, and would also benefit the wildlife habitat in the Central Valley.

The Authority is not oblivious of the need to adjust its project proposal in light of an increased sensitivity for environmental concerns and severe federal budget constraints, and the Authority is open to discussion of suitable non-federal cost participation in the Mid-Valley Canal Project. But it is clear that development of the Mid-Valley Project could not occur with the water allocation moratorium provision of S. 484. The legislation must be modified to accommodate multipurpose projects that can achieve fish and wildlife improvements along with providing additional water supply for relief of the ground water overdraft of the San Joaquin Valley.

Senator **Bradley**. Thank you very much, Mr. Schafer.

Mr. Stanfield.

Senator **Seymour**. Mr. Chairman, while Mr. Stanfield is coming to the podium, why do I not just ask that the statement of the California Bankers Association become part of the record.

Senator **Bradley**. The statement is a part of the record.

Senator **Seymour**. Thank you, sir.

[The prepared statement of the California Bankers Association follows:]

PREPARED STATEMENT OF THE CALIFORNIA BANKERS ASSOCIATION

The California Bankers Association, representing virtually all of the 420 plus banks in the state, supplies a significant percentage of the operating and long-term credit to the farmers and ranchers in California. We have a strong commitment to agriculture and its vital role in the economy of California, the nation and the world.

We recognize that California's future and continued economic prosperity are tied to water. Population growth and the long-term vitality of the State's major industries—especially agriculture—are dependent upon our water resources. However, proposed legislation threatening changes in existing water supplies has created an increasing uncertainty as to the source, the available amount, and the cost of future water supplies for many users.

These factors, cost, quality and continued availability of water, are a critical component in the loan analysis and credit decision process. Water is required to produce the crops and livestock that generate the income and cash flow farmers and ranchers use to repay loans. The cost and availability of water also impact the net income produced by the farm's key asset: land. Reduction in water supply or increases in water cost will generally decrease the net income that can be produced by the land. If net income is reduced, the value of the land is reduced as well.

Thus, farmers applying for loans are expected to have verifiable, reliable sources of water. Any uncertainty surrounding the cost and availability of water adversely impacts credit requirements, loan terms, pricing and even the availability of credit.

Ironically, the farmers and ranchers with the least working capital and total assets, the very ones who need credit the most, are the most affected by uncertainties over water costs and availability. Any loss or reduction of water rights would require farmers to develop alternative, more costly sources of water. Such sources would result in less income and ability to service future and existing debt. Those farmers who could not afford these additional costs may simply have to go out of business.

Traditional long-term water contracts provide a critical element of stability to the agriculture industry and, therefore, also to agricultural lenders. Existing contracts ensure that a specified amount of water will reach the user for a specified duration. The tenuous nature of water contracts under this bill will make it very difficult for lenders, who currently rely upon 20 to 40 years of promised delivery, to finance farmers who no longer have a guaranteed long-term water supply. [Sec. 4(c)]

Not only will lenders be faced with new levels of uncertainty, they will have to bear the added cost of continually monitoring the contract renewal process. Increased loan-sevicing costs to the lender mean increased cost of credit to the farmer. This reality compounded with the drought and the freeze in California threaten agricultural lenders and producers alike.

The effect of the growing uncertainties surrounding the supply and cost of water is exacerbated by the changing nature of the financial services industry. Individual banking institutions are increasingly deciding to serve specific market niches. Thus, actions which increase uncertainty and risk for agriculture, set it apart from other borrowers in terms of risk, and serve as disincentives for lenders to serve farmers at a time when reasonably priced capital is essential if we are to be globally competitive.

Furthermore, the State of California has embarked upon programs to directly address water supply, water quality, as well as other environmental and agricultural concerns. Without a doubt, these are serious challenges facing the state. Many of these programs are new and ought to be given the opportunity to solve California's water issues.

STATEMENT OF ROBERT L. STANFIELD, GENERAL MANAGER AND CHIEF ENGINEER, MADERA IRRIGATION DISTRICT, MADERA, CA

Mr. STANFIELD. Good afternoon, Mr. Chairman, Members of the committee. I am Robert Stanfield, I am general manager and chief engineer of Madera Irrigation District.

Allow me to give you a little thumbnail sketch of our District, so hopefully you will better appreciate the anxieties that we have found with the Central Valley Project Improvement Act.

Our District has about 130,000 acres. We are located in Central San Joaquin Valley, about 20 miles north of the city of Fresno.

Our District reflects the very fabric of reclamation law. The operating family farm is about 70 acres. In 1990 in our District we had crop values approximating $200 million. The principal cropping patterns were permanent crops, vineyards, stone fruits, and nut trees. Less than 5 percent of the District's cropping patterns are directed to the so-called surplus commodity crops.

Our water supply from the Bureau of Reclamation comes from the Friant Division of the CVP. We offer our growers on an average year about 1.7 acre-feet per acre. About 70 percent of their consumptive use demands, which means the balance has to be obtained through groundwater extraction.

Unfortunately Madera Irrigation District overlies the groundwater basin that has been declared by the State of California as being critically overdrafted.

Perhaps I can best characterize my testimony by simply it just scares the hell out of me. The act places Central Valley Project contracts in jeopardy. The proposed act likewise provides Secretarial authority that would breach the 1939 contract between the United States and Madera Irrigation District in which we conveyed the dam site electric water rights to the United States for contractual assurances that we would have a permanent water supply in the future.

I guess we would have been a lot better off today if we would not have sold the dam site—excuse me.

[Laughter.]

Mr. STANFIELD. I have ambivalent feelings when it comes to the issues of fisheries and conflicts with irrigated agriculture. I had early ambitions to become an ichthyologist and to this day remain very avid in my interest of fisheries. But even with this personal philosophy I find the legislation, however noble in intent, parochial in that the interests of fish and wildlife are being enhanced to the detriment of the consumer.

The legislation restricts renewal of water service contracts to longer than 1 year until specified fish and wildlife and water quality objectives are satisfied. The proposed act thus hangs as a guillotine to future contract renewals with districts never knowing when the rope will be turned loose.

The bill does provide renewals up to 20 years, however this comes with the postulate that the contractor commit a percentage of his contract waters for fish and wildlife purposes. The legislation thus places the districts in hostage.

Execute a multiyear contract in order to maintain integrity in financing opportunities and the district loses a portion of its CVP supply. This would impose additional demand on the groundwater basin and ultimately leave the grower with no economic alternative other than taking land out of production. The end result is federally legislated land use zoning.

Land values would decline and subsequently the county tax bases would erode, reducing revenues necessary for central services and schools. The remnant would be a decay of a regional economy.

Section 6 of the act is a point guard of the legislation, no pun intended, Mr. Chairman. This part of the bill provides for the restoration of anadromous fisheries to preproject levels. The legislation makes reference to anadromous fisheries of Sacramento and San Joaquin and Trinity Rivers and their respective tributaries. Where is the provision within the legislation for the Klamath River below the confluence of the Trinity at Weitchpec? Does the act deliberately ignore predacious acts of the Indians on anadromous salmon and steelhead fisheries in the lower Klamath where gill netting remains largely uncontrolled? There is a difference between subsistence fishing and entrepreneurship.

Where within the act is a provision for fiscal responsibility for fishery enhancement for commercial fishermen? Certainly if you are proposing a fee schedule it should be broad enough in scope to include all the beneficiaries of the act.

In 1990 the California Legislature established the San Joaquin River Task Force to develop a plan to restore and improve the fishery and wildlife conditions of the San Joaquin River. CVP water users supported this legislation and participated in the task force.

Our District is currently evaluating two projects that would enhance the San Joaquin River below Friant Dam yet retain the integrity of service to our organization. These project concepts are but two examples of consensus task forces working together to protect and restore environmental values.

Let me close by saying no one disagrees that California has water problems. Yesterday's land, the water use policies are no longer applicable to our State's current and future needs. Resource use philosophies have been altered by alarming increases in population and environmental awareness.

But in all honesty I do not believe the Central Valley Project Improvement Act is the savior. In reality, the bill, if enacted, would have devastating impacts on Madera Irrigation District and the California agricultural economy.

There is a better dialogue today than ever before between competing interests, including agricultural, municipal, and environmental advocates. Give the consensus-building task forces a chance. Through such coalition there is opportunity. To legislate changes is to divide and fuel long-simmering animosities.

Mr. Chairman, I have expanded on other provisions of the act in my written testimony, and I appreciate the opportunity this morning. Thank you.

[The prepared statement of Mr. Stanfield follows:]

PREPARED STATEMENT OF ROBERT L. STANFIELD, GENERAL MANAGER AND CHIEF ENGINEER, MADERA IRRIGATION DISTRICT

Good morning Mr. Chairman and Members of the Committee, I appreciate the opportunity afforded me by your kind invitation to appear before the Senate Subcommittee on Water and Power and give testimony relative to S. 484, the Central Valley Project Improvement Act. I am hopeful my comments will contribute to a better understanding of the importance of water to California agriculture and rural America.

I am Robert L. Stanfield, General Manager and Chief Engineer of the Madera Irrigation District. Allow me to give you a thumbnail description of our District and the foundation of our anxiety associated with S. 484.

The District encompasses an area of approximately 130,000 acres in the Central San Joaquin Valley, located 20 miles north of the City of Fresno.

The District reflects the fabric of Reclamation Law. The average operating family farm is approximately 70 acres. In 1990, crop values totaled $200,000,000 from a diversity of 35 different crops, major crop patterns being vineyards, stone fruits and nut crops. Less than five percent of District lands are planted to so-called "surplus" commodity crops.

The District has two categories of contract water from the Friant Division of the Central Valley Project; Class I in the amount of 85,000 acre-feet and a Class II entitlement of 186,000 acre-feet. In an average year the District would receive 100% of its Class I and 48% of its Class II contract, totaling 175,000 acre-feet. These contracts in an average year, when combined with the conservation yield of Hidden Dam on the Fresno River and adjudicated and appropriative water rights, increase the District's supply to approximately 220,000 acre-feet and would provide District growers approximately 1.7 acre-feet per irrigable acre. This represents about 72% of the consumptive use demands (sans effective precipitation) of the crops served from District canals, with the remaining crop water needs satisfied from ground water extraction.

Water cost to District growers, including assessments and water tolls, would be approximately $26.98 per acre-foot if 1991 were an average year. This exceeds the grower's cost of about $19.00 per acre-foot for energy only to pump ground water, however does not provide for capitalization and maintenance of the individual's pumping plant. Unfortunately 1991 is the fifth successive drought year on the San Joaquin River watershed, and the melded water cost to District growers will approximate $31.86 per acre-foot with half of an average year's supply available. The District is in the last year of the original 40 year Bureau contract, and these tolls will increase about $10.00 next year under the new water service contract. A majority of the water cost increase will have to inure from assessment revenues to retain a surface water price that is competitive with the cost of pumping.

Madera Irrigation District is within the ground water basin identified by the State as the "Madera area". This basin has been declared by state officials as critically overdrafted. A responsibility of the District is to conjunctively utilize its water resources to minimize adverse impacts on the ground water basin.

It is projected that the representative well within the District will have a depth to static water level of 130 feet below natural ground elevation in October of this year. The typical District well will reflect a five year decline of approximately 40 feet. This compares to a historical annual decline of 1.25 feet or a drop in water levels of approximately six feet for the drought period.

Quantifying the overdraft or "mining" of the basin for the five year drought period ending October, 1991 indicates approximately 600,000 acre-feet of ground water will be extracted and not replenished, enough to supply the City of Madera with a current population of 30,000 for 60 years at its current rate of use. Hopefully 1992 will be the first in a series of bountiful water years, and the arduous task of rebuilding our ground water basin can commence once again.

Even though I have had only an abbreviated time period to review the proposed legislation, I can perhaps consolidate my comments by simply saying, "It scares the proverbial 'hell' out of me." The Act places all Central Valley Project contracts in jeopardy. Obviously this would ultimately domino down to the family farm where assurance of a future water supply would be weakened by the potential actions of the Secretary in the reallocation or erosion of contract quantities for the equitable treatment of fish and water fowl habitat. The proposed Act likewise provides secretarial authority that would breach the 1939 contract between The United States and the Madera Irrigation District. It was in 1939 that the United States acquired the Friant Dam site and essential water rights on the San Joaquin River from the District pursuant to a contract which assured the District a permanent supply of water from the project.

Perhaps I have ambivalent feelings when it comes to the issues of fisheries and conflicts with irrigated agriculture. I had early ambitions to become an ichthyologist and to this day remain avid in my interest of fisheries. Even with that personal philosophy I find the legislation parochial, in that the interest of fish and wildlife are being enhanced to the detriment of agriculture. Critics often target the high level of agricultural water use, yet in terms of actual dollars, we Americans spend less for food than the Israelites, Germans, Japanese, Russians and peoples of most other nations of our world.

LEGISLATION CONCERNS

More specifically let me bring your attention to some of the provisions of the proposed legislation that creates an inordinate concern.

The mission of the Act is to promote and expand the authorized uses of the Central Valley Project (CVP) with the principal beneficiaries being fishery and wildlife restoration and enhancement. However noble, the expanded purpose can only be realized by diminishment of the project yields available to existing CVP agricultural and municipal contractors.

The legislation prescripts renewal of water service contracts for longer than one year until specified fish and wildlife and water quality objectives are satisfied. The proposed act hangs as a guillotine to future contract renewals with districts never knowing when the rope will be released. This would have a devastating economic consequence on our District growers. Lending institutions look for stability to support their loans. Without the assurances of a long term water supply, there would be reluctance in financing farm improvements, including conservation facilities such as drip and sprinkler systems. Conversely, short term loans are inherently more expensive, given higher interest rates and loan origination fees. Loan terms would be coincident with water contract length. Short term loans would not provide an adequate amortization period for land acquisition or development of permanent crop patterns.

The bill does provide for renewals up to 20 years, however; this comes with a postulate that the contractor commit to fish and wildlife purposes ten percent (10%) of the water under contract for 10 years, and an additional one percent (1%) per year for the term 10 through 20 years.

The legislation places the District in hostage. Execute a multi-year water contract in order to maintain integrity of financing opportunities, and the District loses a portion of its CVP supply. This would impose additional demand on the ground water basin and ultimately leave the grower with no economic alternative other than taking land out of production. The end result is federally legislated land use zoning. The growers' ability to repay their federal loan obligation for construction of the District distribution system would be jeopardized and default a possibility.

Land values would decline and subsequently the county tax base would erode, reducing revenues necessary for essential services and schools. The remnant would be decay of a regional economy.

The transfer provisions nurture opportunity to profit without regard to secondary impacts such as local economies. Water transfers and corollary reduction in farm acreage would undermine local supporting business enterprise. This is especially true in rural farm areas such as Madera County and is well documented by the current drought. If the surface water deficiency is offset through ground water extraction, there is likelihood of localized well interference with additional stress on the ground water basin. This causes particular havoc with shallow, rural, domestic systems. In my judgment California state statute precludes transfers unless the water is determined surplus to district needs. I have grave concerns with legislation that abrogates existing statutes.

Probably to the Committee's surprise, the legislative provision for metering is not totally obtrusive. The Madera Irrigation District has long supported ground water management with local control. We differ from many of our water community colleagues on this issue. Metering of surface water deliveries is costly; however, spawns water conservation and water use accountability. Our District meters all farm deliveries and has done so for a number of years. It provides the basis for equitable apportionment of supply and billing for those Districts that charge on a per-acre-foot basis.

Section 6 of the Act is the "point-guard" of the legislation. Ostensibly this part of the bill provides for the restoration of the anadromous fishery to pre-project levels. The legislation makes reference to the anadromous fisheries in the Sacramento, San

Joaquin and Trinity Rivers and their respective tributaries. What provision has been made for the Klamath River below the confluence of the Trinity at Weitchpec? Does the Act deliberately ignore predacious acts of the Indians on the anadromous salmon and steelhead fisheries in the lower Klamath where gill netting remains largely uncontrolled? There is a difference between subsistence fishing and entrepreneurship.

Where within the Act is the provision for fiscal responsibility for fishery enhancement by commercial fishermen? Certainly if you are proposing a fee schedule it should be broad enough in scope to include all fishery beneficiaries of the Act.

Sophistically, the legislation includes striped bass in the anadromous fishery. This is true; however stripers are not indigenous to California but were imported prior to the turn of the century.

Additionally, sturgeon is included in the anadromous fishery category which might be technically correct, as they migrate from the brackish salt water of the San Francisco Bay up river. To my knowledge the Sacramento sturgeon do not migrate to the oceans per se; however, I certainly do not have any expertise on this subject. Relative to shad, I have personally flyfished for shad on the Sacramento River between Los Molinos and Red Bluff every year since 1959 and have not noted a decline in the shad fishery. In my opinion shad are more sensitive to water temperature than flow quantity.

Another provision of consequence embodied in the Act is the surcharge on project water and hydroelectric power sales. The $30 million to be generated for the Restoration Fund is equivalent to today's Bureau of Reclamation Operations and Maintenance Budget. Obviously this reverts back to the contractors, including Madera, in higher water costs. I caution the Committee that ultimately the consumer must shoulder the cost of higher priced commodities resulting from increased farm cultural costs, including water. The lending institutions will scrutinize market conditions to assess their acceptance of higher priced food and fiber products. If the market place will not absorb the pass through increases associated with higher water costs, then farm financing will be jeopardized.

Yet another concern is the non-discretionary provisions of the Act providing the opportunity for legal action against districts, directors and management to bring suit for noncompliance with the Act or regulations established under the Act. Obviously any litigation is costly and even trivial action against a district would result in exceedingly high legal costs in defense.

DIALOGUE PATH TO SOLUTION

It has been said that controlling water is tantamount to controlling the destiny of the land and people. I can personally bring witness to this statement, as when my grandfather settled in Southern Madera County in the 1870's, the agricultural economy was principally tied to dry land farming, ground water was artesian in many locations, and the uncontrolled flows of the San Joaquin River provided habitat to numerous wildlife and anadromous fisheries.

Yesterday's leaders were cognizant that policies to be established must remain sensitive to environmental concerns, yet provide for the requirements of future generations of Californians. Farmers are the original environmentalists.

In 1990, the California Legislature established the San Joaquin River Task Force to develop a plan to restore and improve the fishery and wildlife conditions of the San Joaquin River. CVP water users supported the legislation and are participating on the task force.

Madera Irrigation District is currently investigating an environmentally palatable pump storage project called the Fine Gold Water Conservation Project. This project would take flood water, which would historically be passed through Millerton Lake and Friant Dam, and pumped into an offstream reservoir. This project has potential to provide flood protection on the Lower San Joaquin River and fragile bay-delta lands, increase the conservation yield of the Friant Project, and lastly provide increased flows to the San Joaquin River for fishery enhancement.

District staff has also completed a cursory reconnaissance study that identified a 20,000 acre service area, principally vineyards and nut trees, that could be provided water from a pumping plant on the San Joaquin River located about one-half mile upstream of the Highway 99 bridge. During the proposed operating period, 9,000 acre feet would be released from Friant Dam and Millerton Reservoir to the San Joaquin River for subsequent diversion by the District at the facility. Release of District water to the San Joaquin River to satisfy average year irrigation demands in the selected service area would increase historical river flows in this 20 mile reach by 25 to 40% during the summer months. This proposal has spurred enthusiasm of the California Fish and Game Department.

These project concepts are but two examples of consensus task forces working together to protect and restore environmental values. I am confident that through establishing dailogue, exchange of information, negotiation and compromise that programs could be developed and implemented without damage to the rights or impairing the interest of the participating parties.

SUMMARY REMARKS

In summary no one disagrees that California has water problems. Yesterday's land and water use policies are no longer applicable to our state's current and future needs. Resource use philosophies have been altered by an aling increase in population and environmental awareness, but in all honesty, I do not believe the "Central Valley Improvement Act" (S. 484) is the savior. In reality the bill if enacted would have devastating impacts on the Madera Irrigation District and California agricultural economy.

CVP users are sensitive of the environmental consequences created in part by project facilities and operations. To place the responsibility on project users to remedy all environment abuse is equally wrong.

There is a better dialogue today than ever before between competing interests, including agricultural, municipal and environmental advocates. Give the consensus-building task forces a chance; through such coalition there is opportunity. To legislate change is to divide and fuel long simmering animosities.

Thank you very much for the opportunity to give testimony today, and I leave with you the importance of the vested charge of all to forge water policy for the future and yet recognize that the one million acres of agricultural community in the Friant service area and its 320,000 residents is one of the most productive and unique regions in the world. To place in jeopardy the long term contracts is to place in jeopardy an agricultural area that exceeds the size of many nations.

And lastly, don't forget about the four year old kid who just landed a three inch bluegill from the reservoir behind a CVP dam, or the senior citizen whose only affordable recreation is catfishing in a Bureau canal. They represent both yesterday's and tomorrow's custodian of our precious natural resources.

Senator **BRADLEY**. Thank you very much, Mr. Stanfield.

Mr. Hall.

STATEMENT OF STEPHEN K. HALL, EXECUTIVE DIRECTOR, CALIFORNIA FARM WATER COALITION AND LAND PRESERVATION ASSOCIATION, FRESNO, CA

Mr. **HALL**. Mr. Chairman, my name is Stephen Hall, I am the executive director of the California Farm Water Coalition and Land Preservation Association.

Let me say before I begin my prepared remarks, like any good farm water representative, I will be glad to yield any surplus time that I might have when I complete my remarks to Mr. Somach, if I have any surplus.

Our organization represents a broad cross-section of agricultural interests around the State. It is broader than the CVP water users. But certainly the CVP is going to play a critical role in the 1990's and beyond in California for all of the State.

And your bill, if it becomes law, will go all the way toward redefining the CVP and the role that it will play.

So let me, if I may, try to be as brief as I can and cite three aspects of your bill that I believe stand out. One positive and two negative.

First the positive. It is clear now that this bill is forcing all water interests in the State from all sides to critically examine the way we manage the resource. And it is particularly important because it is directed at the largest project in the State. It comes at a time when water contracts are coming up for renewal, and it is coming at a time when the State is running out of developed water.

You may have detected that note of desperation in Mr. Boronkay's voice that reflects that.

I have to tell you in all candor this is a pretty uncomfortable exercise for agriculture. The stakes are high, we have a lot to lose. Nevertheless I believe the exercise that your bill has forced is valuable. First because there is a lot of attention being paid to water now, and your bill is a focal point for the discussion. And that is valuable.

Second, I, for one, would like to see the issues that will confront water districts as they try to renew their contracts. I would like to see those issues resolved as soon as possible. And my hope is that if your bill becomes law, then the intent and the effect of the bill will be to act as a catalyst to lay aside some of those issues so that when those districts renew their contracts they can do it with relative calm and certainty because the issues that are so much a part of the renewal process will have been laid to rest.

I am hopeful that will happen, I see you nodding. I appreciate that.

So I commend you, Mr. Chairman, for a bill that is a catalyst and a focal point on an issue that is badly in need of both.

Now for the negative. You probably figured out by now we are pretty proud of agriculture in California. We think that is justified. We are the premiere agricultural State in the country. We produce about half of the Nation's fruits and vegetables. And that is due in large part to a reliable supply of water.

As bad as the current drought is, it would have brought any other State to its knees agriculturally. Agriculture in California will survive in large part because of the system that sustains us even during these droughts. The losses will be large in agriculture from this drought, but they will not be as crippling as they would have been to some other State.

Now, your bill would not remove any of the physical capability that provides that reliability, but the reliability would be damaged. Now, you have heard testimony from earlier witnesses about that.

For a farmer, having year-to-year water is like having to find out, well, this year am I going to farm, will I have the land. As one farmer put it to me rather succinctly, he said, "Please tell Chairman Bradley that you cannot balance the State's competing demands by just hitting the minus key under agriculture's column." That is the view that they hold.

Now, the alternative that the bill provides is giving up some water. You spoke to that. Let me speak about it as well. On the surface that makes a lot of sense. We clearly need more water for other uses in the State. And the contract terms provide some incentive for farmers to give up some water.

Now there are three ways they can do that. One is take land out of production. Two is to overdraft groundwater. And three is to conserve.

Now no one supports long-term overdrafts. You have heard others describe the impacts from land retirement. Now, let me assure you, Mr. Bradley, that I have worked in agriculture for some time, on the economic side of it, I am not an expert, but I can tell you that the evidence of the impacts that come is real and it is dramatic. In fact the evidence suggests that even small acreages of land taken out of production can produce very dramatic impacts. I would be happy to elaborate during questions.

I cannot believe——

Senator **Bradley**. Mr. Hall, if you could, finish up with your——

Mr. **Hall**. I will. I cannot believe you want to create those impacts and so I prefer to believe that what you want to do is create the water from conservation.

Again, I would be happy to cover the conservation issue during questions. Let me just say that the potential for conservation is there, but it is limited.

Finally, the second negative is the effect your bill is having on the consensus process in California. I know you have heard about the consensus process; it is promising, but fragile. Let me offer to you in summary fashion where I believe you, Mr. Bradley, and your measure can fit in.

There is a lot of temptation to abandon that consensus process as a result of your bill. Let me offer an alternative. I think that your position as chairman of this important committee gives you, clearly gives you the stature to produce consensus. I believe the fact that you have authored this bill shows you have the interest in solving the problem, and your experience in the Newlands Projects show that you have the skills to bring consensus.

So let me invite you and call upon you, Mr. Bradley, to engage in the process that we are engaged in out here of consensus.

Now there is a lot of ground to cover. Your bill is a little different than the water users bill. You have your bill, they have theirs. We have a consensus process. There are large differences but I do detect a lot of similarities and a converging of effort to try to bring some sense to these problems.

So let me invite you again, Mr. Bradley, to become involved in the consensus process, let me urge you to revisit your contract limit language.

And then finally on drainage, I have been asked to comment on that, but I will withhold the comments. I do have some comments in our written testimony, and specifically on the Mono Lake proposal I would be delighted if the water users that I represent on the west side of the San Joaquin Valley could correspond with you and your committee on that issue.

Thank you.

[The prepared statement of Mr. Hall follows:]

Prepared Statement of Stephen K. Hall, Executive Director, California Farm Water Coalition and Land Preservation Association

Senator Bradley and Members of the Subcommittee: Thank you for inviting me to testify before you today. I am Stephen Hall, executive director of the California Farm Water Coalition. The Coalition is a nonprofit membership organization providing public information and an agricultural viewpoint on current water issues. Our members represent a broad cross-section of agricultural water interests from throughout California. While our membership extends well beyond federal water users, federal Central Valley Project water represents a significant fraction of the water used by agriculture in California and it is now clear that the Central Valley Project will be a large part of California's water picture in the 1990s and beyond.

Mr. Chairman, your bill, S. 484, which is the subject of the hearing today, will go a long way toward defining the role the Central Valley Project will play in California's water future and how it will play it. S. 484 has already made quite an impact in California's water community. Among the many features of your bill that have already had an effect, three stand out, one positive and two negative.

First, the positive. S. 484 is forcing interests on all sides of the water debate to reexamine how water is managed in California as well as the purposes for which it is managed. This bill has even greater leverage because it is directed at the single largest water project in the state and because it is being introduced at a time when contracts for water developed by the project are coming up for renewal. Because of the way this bill impacts on those important issues and because California is now beginning to run out of the water it has developed, the stakes are very high. Please understand, this is a highly uncomfortable exercise for agriculture because we have a lot to lose. Nevertheless, I believe it is valuable, both because water is becoming an increasingly valuable resource that we cannot afford to squander and because if the water debate continues, and it certainly will, it might as well be directed at some focal point. Your bill is certainly such a point of focus. I, and others would much prefer that the issue surrounding contract renewal and water allocation be settled now so that when federal contract districts renew their contracts, they can do it with relatively calm and certainty. If this bill passes, I believe that relative calm and certainty will be established because so many of the issues that now confront them will have been resolved.

So I commend you, Mr. Chairman, for providing a bill that is both a catalyst and a focal point to an issue that is badly in need of both.

Now for the effects, which, from our view, are negative. The first may be unintended. It stems from the bill's requirement for short, rather than long term contracts. Others have explained why this requirement places such a burden on water users, but I believe it can not be explained often enough.

California is the premier agricultural state in the country. In fact, there really is no other state that compares. We produce fully one-half of the nation's entire supply of fruits and vegetables, and nearly all of the most popular kinds of produce we find in our grocery stores. This abundance is due to a unique combination of climate, soil and reliable water. Many other states rely on rainfall and would have been devastated by our current drought. Although California agriculture will sustain heavy losses from the shortage, it will survive. That resiliency is due in large part to a system that provides water consistently.

Nothing in your bill removes the physical capability of the system, but it certainly places in doubt the availability of the water the system provides. For a farmer, it would be the equivalent of not knowing whether his land would be available to farm from year to year.

It is ironic that you and others in the Congress are seeking to reform reclamation law so that reclamation benefits can be spread more broadly to more farmers, while at the same time this bill would effectively preclude new farmers from contracting for reclamation water. No bank is going to provide the long term financing a farmer needs to get started if that farmer cannot prove he has a reliable water supply into the future.

S. 484 does provide for longer term contracts to those who are willing to give up a portion of their water supply. On the surface, that makes sense. Water is short, everyone needs to become more efficient and this will provide some efficiency incentives. There really is no disagreement over whether farmers can become more efficient. Although they are among the most efficient irrigators in the country, improvements can be made. The question is whether efficiency improvements by individual irrigators can produce water that can then be put to other uses. On that question there has been great debate, but recent events have brought more clarity to the issue.

There is a prevailing notion in the water community that there is a lot of water that could be conserved in agriculture and transferred. That notion has been tested recently by studies generated by the State Water Resources Control Board's Bay-Delta hearings. The State Board's staff analyzed the amount that could be conserved and transferred. The staff found the amount to be on the order of 100,000 to 200,000 acre-feet per year. That is a significant volume of water, but far less than was expected, and certainly not enough to meet other needs in the state. It should be noted that the State Board staff had ample incentive to find as much water through conservation as possible, since the staff recommended more water be allocated to the Bay and Delta.

The State Board organized a work group to review the staff's work, and that work group included environmental, as well as agricultural representatives. The work group could not arrive at a final figure on the amount of water that conservation could produce but the estimates of the work group were slightly lower than the staff's figures.

The State Board staff and the work group found what others have discovered; that the water used on an individual farm which does not go directly into the plant is recycled. That recycling takes place when water goes into the groundwater and is picked up by wells or when it flows back into the irrigation system and is reused by a downstream farmer.

There are two conclusions one can draw from these findings. The first is that agricultural conservation should be aggressively practiced to capture that water that is now being lost. The second is that conservation but will not yield anything near 10 or 20% of the water used by agriculture in the CVP.

Because of this recycling effect within the CVP, one farmer's conservation efforts can, and often will, impact on his neighbor's supply. That being the case, the amount of water a farmer could give up through conservation would not approach the 10 to 20% he would need to give up to quality for a long term contract. The farmer is then faced with either taking land out of production or living with a short term contract.

I have already described some of the problems with short term contracts. The problems with land retirement are even greater. Aside from the problems faced by the farmer in shrinking his business enterprise, the ripple effects in the local economy would be pronounced. Evidence from the recent freeze and current drought amply demonstrate that agriculture is the economic engine for central California. When farm land is fallowed, jobs disappear and the entire economy suffers.

I cannot believe the intent of this bill is to create such social and economic hardship. I prefer to believe that the bill was drafted in the belief that the water would be available through conservation or reductions in so-called "non-essential" crops. Those of us in agriculture are willing to review with the committee staff the data on water conservation potential. We are also willing to examine with the committee certain crops and their role in the marketplace. However, we are convinced that an objective view will conclude that there is not the water available through conservation and crop shifts that is commonly believed, and that farmers will be unable to qualify for long term contracts through those means. We further believe that short term contracts will place an untenable burden on farmers and that some farmers will be driven out of business or precluded from starting a farm business because of this provision.

We therefore urge you, Mr. Chairman, to review this provision of your bill after considering our testimony.

The second major negative aspect of this measure is its effect on the discussions now underway among California water interests. I believe you are aware, Senator, of efforts by major environmental, agricultural and urban interests to develop consensus on the state's future water needs. That process is promising but delicate. It will require all interests to put aside long held beliefs, and, perhaps more importantly, some cherished remedies. Your measure promises great things to environmental interests and make some mild promises to urban interests in the form of more water. It is understandable that environmental interests would be tempted to embrace your bill, even if it meant abandoning the consensus process. It is equally tempting for those in agriculture to fight your measure and back its own favorite approaches. I believe both sides should resist that temptation and, instead, make themselves available to work with you and others who are interested in constructive water policy. Your position as chairman of this committee certainly gives you the stature to take on a leadership role. The fact that you authored this bill demonstrates your commitment. Your experience in the Newlands project establishes that you have the skills to forge consensus.

I and others in agriculture are calling on you Senator to engage in this consensus effort in an active way and to use your bill as the vehicle to make the consensus product into law. Certainly, it would require you to modify the bill, since it is not a consensus product and since it cannot be accepted by CVP water users. However, there is great potential to make progress on these issues. The CVP water users have drafted a bill which seeks to accomplish much of what your bill seeks. I view this as a good faith effort to identify and address current environmental problems and, where the problems are the result of CVP, to place the burden of their solution squarely on the project's beneficiaries.

Clearly, there are many issues not yet resolved. It will not be a simple matter to reconcile your measure and the draft prepared by the CVP water users. The consensus process remains uncertain, as well. It is significant, though that all of these separate efforts are converging on many of the same problems and that the parties are showing a surprising degree of cooperation in addressing them.

We urge you, Senator to capitalize on the opportunity presented by these unique circumstances, and to merge your efforts with those underway here in California to create a measure that spawns cooperation rather than conflict, and progress rather than litigation. If there is one thing that California water politics has taught its practitioners, it's the lesson that the "I win, you lose" approach produces a lot more court cases than it does water.

Finally, because of my experience with drainage issues, I have been asked to comment on the provisions in your bill dealing with drainage management.

I can find nothing in your measure that is inconsistent with good drainage management, in that it calls for drainage dischargers to obey the law, and reaffirms the responsibility of the Secretary of Interior to provide drainage service. However, two provisions in the bill are cause for concern.

The first deals with responsibility for drainage. Currently there are a number of water agencies that contract for CVP water and that also serve drainage-affected lands. In many cases those districts have no direct authority to control drainage within their boundaries. Your bill would make those districts responsible for that drainage without giving them the attendant authority. Since drainage water arises from non-point sources, it is often difficult to determine whether the source of the water is on a particular farm or even within a particular district. As a result, it may not be possible for districts under their current authority and with the current level of knowledge to assume full responsibility for drainage management.

The second concern arises from the provision that mandates compliance with both state and federal law. Certainly it is the intent of local agencies to comply with all applicable laws, however the state of drainage law is currently in flux. In fact, there is a potential conflict between federal and state standards on agricultural drainage. Districts should not be asked to comply with both sets of standards when they are in conflict.

Because of our concerns with the existing language, we recommend the language be changed to specify those districts with drainage authority be given the responsibility for standards compliance. We further recommend that compliance with state standards, since the federal standards have not yet been developed.

In summary, Mr. Chairman, let me renew our call for a modification of the existing language on contract terms, repeat my invitation for you to join the parties at work on a consensus approach and recommend our changes on the bill's drainage provisions. I want to thank the Committee again for the opportunity to testify.

Senator **Bradley**. Thank you very much, Mr. Hall.

Audrey Raterman.

STATEMENT OF AUDREY S. RATERMAN, PRESIDENT, CENTRAL VALLEY CHAPTER, CALIFORNIA WOMEN FOR AGRICULTURE, FRESNO, CA

Ms. **Raterman**. Senator Bradley, thank you for giving me the opportunity to speak before you and your panel today. My name is Audrey Raterman and I am president of the Central Valley Chapter of California Women for Agriculture, a Statewide organization of volunteer women who share a common dedication to the survival of the State's leading industry, agriculture.

The Central Valley Chapter that I represent encompasses Fresno and Madera counties in the San Joaquin Valley. Both counties rely on a strong agricultural industry as the base of their economies. And both use a combination of surface and groundwater supplies to sustain their agricultural production.

The west side of Fresno County is one of the most productive regions of prime agricultural land anywhere in the world. The rich soils and suitable climate allows Fresno County farmers to grow more than 35 varieties of crops, including fruits, vegetables, nut crops, livestock, and fiber, commodities upon which all of us depend.

While this area relies to a certain extent on pumped groundwater, most of the area receives water from the Central Valley Project.

And since S. 484 poses a tremendous threat to our farmers' ability to secure long-term water supplies, which would devastate the economies of our area, I must oppose your bill as it is currently proposed.

My primary concern with this proposed legislation is this: redirecting the Central Valley Project to decrease long-term water reliability to our farmers will have a devastating impact on our local rural economies.

Agriculture needs water and by taking away the Central Valley Project's long-term dependable water supply, whether by limiting contracts to 1 year, or by decreasing water supplies annually, many farmers will lose their ability to farm. And this, in turn, will have a ripple effect throughout the economy.

Not only will farmworkers find themselves unemployed and many allied industries will also suffer losses, equipment dealers, service providers, seed and fertilizer manufacturers, even our local city and county governments will find themselves in a downward spiral as a result of a less productive agricultural economy. And the rippling effect will continue.

Limitation of long-term water contracts to a period of 1 year or for longer periods only if supplies are reduced would totally disrupt the efficient manner in which Central Valley farmers operate. Crop years do not necessarily follow water years. Constant disruptions and uncertainty would decrease a farmer's ability to adequately plan his or her farming operation from year to year.

Additionally, many agricultural lending institutions consider the dependability of a farmer's water supply when granting loans. Without a dependable water supply to point to, many farmers could lose or become ineligible to receive any financing whatsoever.

The limitation on long-term water contracts simply is not reasonable and it prevents farmers and their water districts from financing systems and other on-farm improvements. This situation really creates a Catch-22. Farmers cannot conserve more water without irrigation improvements, yet they cannot afford the improvements without long-term water supplies.

I applaud you, Senator, for your concern about California's environment. California Women for Agriculture is also concerned and supports efforts already underway at the State level to protect and restore environmental values. I fear, however, the Federal legislation aimed at redirecting the Central Valley Project will disrupt our efforts, rather than promote a continued willingness among the various water interests to work together.

I urge you to reconsider your Central Valley Project Improvement Act. I urge you to consider and be sensitive to the dire circumstances many rural cities will face as a result of a decrease in agricultural productivity.

And finally, I urge you to wait and allow the people of this State the opportunity to move forward in their efforts to find equitable solutions to the State's water problems. Solutions that will result in willing compromises for the good of California rather than federally mandated changes that will further divide water interests in the State.

Thank you.

[The prepared statement of Ms. Raterman follows:]

PREPARED STATEMENT OF AUDREY S. RATERMAN, PRESIDENT, CALIFORNIA WOMEN FOR AGRICULTURE, CENTRAL VALLEY CHAPTER

Senator Bradley, thank you for giving me the opportunity to speak before you and your panel today.

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My primary concern with this proposed legislation is this: redirecting the Central Valley Project to decrease long-term water reliability to our farmers will have a devastating impact on our local rural economies.

Agriculture needs water, and by taking away the Central Valley Project's long-term, dependable water supply—whether by limiting contract to one year or by decreasing water supplies annually—many farmers will lose their ability to farm. And this in turn, will have a ripple effect throughout the economy. Not only will farm workers find themselves unemployed, but many allied industries will also suffer losses: equipment dealers, service providers, seed and fertilizer manufacturers, even our local city and county governments will find themselves in a downward spiral as a result of a less-productive agricultural economy. And, the rippling will continue.

The limitation of long-term water contracts to a period of one year, or for longer periods only if supplies are reduced, would totally disrupt the efficient manner in which Central Valley farmers operate.

Crop years do not necessarily follow water years. Constant disruptions and uncertainty would decrease a farmer's ability to adequately plan their farming operation from year to year. Additionally, many agricultural lending institutions consider the dependability of a farmer's water supply when granting loans. Without a dependable water supply to point to, many farmers could lose, or become ineligible to receive any financing whatsoever.

The limitation on long-term water contracts simply is not reasonable, and it prevents farmers and their water districts from financing system and other on-farm improvements. This situation really creates a catch-22: farmers cannot conserve more water without irrigation improvements, yet they cannot afford the improvements without long-term water supplies.

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I urge you to reconsider your Central Valley Project Improvement Act. I urge you to consider and be sensitive to the dire circumstances many rural cities will face as a result of a decrease in agricultural productivity. And, finally, I urge you to wait, and allow the people of this state the opportunity to move forward in their efforts to find equitable solutions to the state's water problems. Solutions that will result in willing compromises for the good of California rather than federally-mandated changes that will further divide water interests in this state.

Thank you.

Senator **BRADLEY**. Thank you very much, Ms. Raterman.

Barry Brown.

STATEMENT OF BARRY BROWN, IRRIGATION ENGINEER, WESTERN FARM CREDIT BANK, SACRAMENTO, CA

Mr. BROWN. Good afternoon, Chairman Bradley, Senator Burns, Senator Seymour. My name is Barry Brown, Irrigation Engineer for the Western Farm Credit Bank.

On behalf of the Bank and its constituent associations, welcome to Sacramento. We appreciate the fact that you have brought your hearing process to the State and we have this opportunity to share some thoughts with you on S. 484.

The Western Farm Credit Bank is part of the national farm credit system, a cooperative lending institution owned by the farmers and ranches we serve. Our district consists of the Western Farm Credit Bank here in Sacramento and 32 stockholder associations serving Arizona, California, Hawaii, Nevada, and Utah. We are the largest agricultural lender in the West, with a California portfolio consisting of more than 20,000 real estate and commercial loans worth more than $4.2 billion.

Approximately 40 percent of this volume is lent to borrowers in the Central Valley and most is served by U.S.B.R.'s Central Valley Project.

Our sole business is making loans to agricultural producers and processors. Because of this narrow focus, our system is especially sensitive to conditions that jeopardize their credit worthiness. We are here, therefore, to help S. 484 avoid such conditions.

Our past experiences in dealing with proposed changes to reclamation law have convinced us that proponents of reform legislation all too often either overlooked or did not adequately consider the effect such legislation can have in limiting or denying credit to U.S.B.R. water users.

We also are here hopefully to contribute to the discussion of how best to manage the CVP that we all need without disruptive consequences. It would be ironic and tragic to see the CVP converted from a device for establishing and sustaining a strong agricultural economy in the Central Valley to a device for disrupting and damaging that same economy. This is the scenario that we fear could happen if certain features of S. 484 are retained.

We will address several of these features within the framework of two broad concerns, uncertainty and increased costs.

First uncertainty. The proposed legislation raises the spectrum of uncertainty to such a high level that four of the five credit factors we traditionally use to evaluate credit worthiness would be, for all practical purposes, relegated to subservient positions behind the factor of collateral.

More specifically, uncertainties would result in collateral value of water as personal or real property becoming a primary determinant in the credit worthiness. Unfortunately, most lenders are not staffed with the kind of expertise this type of analysis requires.

Our concern with uncertainties is twofold. How will they affect our ability to make new loans and what will be their impact on existing loans. I believe I can adequately explore these two concerns by examining some of the uncertainties, rise of contract renewals involving existing loans.

Where real estate loans are based on Government contracts, guaranteed dependable, long-term water supplies, how would lenders and for that matter borrowers be expected to protect their interest if those contracts were suddenly replaced either with 1-year contracts, "till specified fish and wildlife and water quality improvements are met" end quote, or with 20-year contracts with 20 percent less water.

In either case there would be less water and quite possibly a reduction in land values. Rather than do nothing and hope that borrowers would continue to meet the terms of their loans, no matter what contract option the water districts chose, they would consider regulatory requirements and prudent lending practices, and then aggressively attempt to head off potential problems.

What problems would we encounter? First, we would have to set up a process for monitoring contract renewals and dates, and loans by district, which would require new processing programs or manual processing techniques.

The number of loans that we process and the fact that different farm credit entities may make loans in the same water district, processing could be cumbersome and expensive.

Next we would have to arrange meetings with our borrowers to determine contract renewals. It is reasonable to assume that how the renewals would affect——

Senator BRADLEY. Mr. Brown, I am very sorry, but if you could close it off. These lights mean the Ways and Means Committee is about to come in.

Mr. BROWN. I will close it off. All right, we would have to go through a lengthy process which would be very cumbersome and quite expensive. Also in the area of cost we expect there would be many new costs associated with doing business, indirect costs would be based, and many direct costs, that would be imposed by this project.

In summary we feel that the increased efforts to restore fish and wildlife and prudent efficiency of its operations is something we fully support. We do not believe that imposing punitive measures severely affect ag productivity and access to credit is in anyone's best interests.

Finally, we would recommend that S. 484 be particularly sensitive to potential impacts on the ability of lenders to provide agricultural credit.

And I want to really emphasize that you need to be sensitive to that because you do everything else, but if the lenders are not capable of providing the credit, then it is all for naught.

Thank you very much for permitting me to speak.

[The prepared statement of Mr. Brown follows:]

PREPARED STATEMENT OF BARRY BROWN, IRRIGATION ENGINEER, WESTERN FARM CREDIT BANK

Good morning Senator Bradley and subcommittee members. My name is Barry Brown, irrigation engineer for the Western Farm Credit Bank (WFCB). On behalf of the bank and its constituent associations, welcome to Sacramento. We appreciate the fact that you have brought your hearing process to the state and that we have this opportunity to share some thoughts with you on S. 484.

The Western Farm Credit Bank is part of the national Farm Credit System, a cooperative lending institution owned by the farmers and ranchers we serve. The

Eleventh Farm Credit District consists of the Western Farm Credit Bank here in Sacramento and 32 stockholder associations serving Arizona, California, Hawaii, Nevada and Utah. We are the largest agricultural lender in the west with a California portfolio consisting of more than 20 thousand real estate and commercial loans worth more than 4.2 billion dollars. Approximately 40 percent of this volume is lent to borrowers in the Great Central Valley and most of it is served by USBR's Central Valley Project (CVP).

Our sole business is making loans to agricultural producers and processors. Because of this narrow focus, our system is especially sensitive to conditions that jeopardize their credit worthiness. We are here, therefore, to help S. 484 avoid such conditions. Our past experiences in dealing with proposed changes to reclamation law have convinced us that proponents of reform legislation all too often either overlooked or did not adequately consider the effect such legislation could have in limiting or denying credit to USBR water users. This consideration of impacts is even more important today because ever increasing demands on limited water supplies has elevated the importance of water in determining a borrower's credit worthiness. Without adequate water at a reasonable cost, a borrower's financial worth, earning capacity and cash flow are seriously diminished. And it follows that his ability to borrow and pay back is seriously weakened.

We also are here, hopefully, to contribute to the discussion of how best to manage the CVP to meet all needs, without disruptive consequences. We accept as a given, as I am certain everyone in this room does, that the CVP will need to provide additional water for fish and wildlife purposes. How this is to be done is the issue. We fervently hope that such needs will be met through a voluntary, negotiated process rather than through a process that forcibly imposes arbitrary reductions on California agriculture. It would be ironic and tragic to see the CVP converted from a device for establishing and sustaining a strong agricultural economy in the Central Valley to a device for disrupting and damaging that same economy. This is a scenario that we fear could happen if certain features of S. 484 are retained. We will address several of these features within the framework of two broad concerns: uncertainty and increased costs.

UNCERTAINTY

Throughout most of the history of agricultural lending to CVP water users, loans have been made with little concern about the amount, reliability and cost of the water supply. However, during the past decade we have witnessed many changes in Reclamation Law and we now have a long list of concerns to address. We have recognized that societal values change and have worked constructively to help bring about an orderly transition that minimizes uncertainty. We have been able to do this because until recently, no-one has been threatening to involuntarily take CVP water away from agricultural producers. The proposed legislation raises the specter of uncertainty to such a high level that four of the five credit factors that we have traditionally used to evaluate credit worthiness would, for all practical purposes, be relegated to subservient positions behind the factor of collateral. More specifically, the uncertainties would result in the collateral value of water (as personal or real property) becoming a primary determinant of credit worthiness. Unfortunately, most lenders are not staffed with the kind of expertise this kind of analysis requires.

Our concern with uncertainties is two-fold: how will they affect our ability to make new loans and what will be their impact on existing loans. In the interest of time and because others already have addressed the nature of uncertainties in considerable detail, I believe I can adequately explore these two concerns by examining some of the uncertainties arising from contract renewals involving existing loans.

Where real estate loans are based on government contracts guaranteeing dependable long-term water supplies, how would lenders be expected to protect their interest if those contracts were suddenly replaced either with one year contracts "until specified fish and wildlife and water quality improvements are met" or with 20 year contracts with 20 percent less water? In either case there would be less water and quite possibly a reduction in land values. Rather than do nothing and hope that borrowers could continue to meet the terms of their loans no matter what contract options water districts chose, we would consider regulatory requirements and prudent lending practices and then aggressively attempt to head off potential problems. Some of the problems we would face in doing so are the following:

First, we would have to set up a process for monitoring contract renewal dates and loans by district. This would require either new machine processing programs or manual processing efforts. With the number of loans we process and the fact that different Farm Credit Service entities may make loans in the same water district, processing could be cumbersome and expensive. Next we would want to arrange meetings with borrowers to determine how contract renewals have affected their operations. It is reasonable to assume that such meetings would disclose some borrowers are no longer able to meet minimum loan standards. Our next step would be to make decisions to restructure the bad loans or to foreclose and risk litigation. These options are not in the best interests of either borrowers or lenders.

The foregoing discussion assumes that conditions for contract renewal had been met by water districts and that the amount of water given up was known. However, in the case where a water district elects annual contract renewals until "specified fish and wildlife and water quality improvements are met", the determination of the amount of lost water conceivably could take years. Keeping track of the progress of such contracts so that timely loan servicing actions could be taken by the lender could prove to be a burdensome, if not an impossible task.

INCREASED COSTS

We are concerned about those provisions of S. 484 indirectly contributing to increased loan servicing costs and those directly increasing water costs. At a time when agriculture is already staggering under a heavy load of costs associated with environmental regulations and natural disasters, this is not the time to be adding significant new costs to the burden.

In addition to the indirect loan servicing costs that would result from having to deal with contract renewals as discussed previously, increased costs would result from loans being amortized over shorter loan periods and would almost certainly cause cash flow problems.

With regard to increased water costs, we are absolutely convinced that the many provisions of S. 484 that would increase such costs would impose debt levels many farmers could not afford to pay. For example, a farmer in a water district traditionally short of water, conceivably, could be required to pay his pro-rated share of:

(a) a 25 percent transfer tax for all purchased supplemental water
(b) costs for metering ground and surface water
(c) a surcharge on CVP water and power sales
(d) possible costs to prepare a plan to "mitigate fully for damages suffered by anadromous fish populations because of the CVP" and to implement the plan.

We believe that S. 484's approach of using perceived need as the sole basis for establishing new CVP cost elements and then passing them on primarily to project beneficiaries is not the best approach to take. Instead, we believe that many of the environmental enhancement costs should not be borne by project beneficiaries but by all Californians and that any new costs imposed on project beneficiaries be tempered by thorough economic studies demonstrating the ability of farmers to pay.

SUMMARY

While we support increased efforts by the CVP to restore fish and wildlife and to improve the efficiency of its operations, we do not believe that imposing punitive measures that severely affect agricultural productivity and access to credit is in anyone's best interests. We believe that the many efforts currently underway in California to address its numerous water problems, including meeting fish and wildlife water needs, should be given a chance to work. Much progress already has been made in resolving many contentious issues. In addition, the state is embarking on a major new revision of the California Water Plan which will look at all aspects of water use in a way that has never been done before. The products of the many consensus building efforts will be an integral part of such a plan. We urge that any new legislation carefully avoid any elements that would be disruptive to this constructive process.

Senator **Bradley**. Mr. Brown, thank you very much.

Steve Felte.

And I want to assure all the panel members that I will read all the testimony from beginning to end and particularly interested in Mr. Brown's last testimony. I want to come back to it.

Mr. Felte.

STATEMENT OF STEVE FELTE, GENERAL MANAGER, CALAVERAS COUNTY WATER DISTRICT, SAN ANDREAS, CA

Mr. FELTE. Thank you, Senator, for the opportunity. My approach will be a little bit different in that we are not a water user in the CVP, but we are a power user from the Calaveras County Water District, and I also am chairman of the board of the Calaveras Public Power Agency, which receives and allocates electrical power to agencies within the county.

Let me just try very briefly to summarize some of the things I wanted to point out. I think there is clearly a need to do something and I certainly commend you for the efforts to do that.

Definitely the Central Valley Project must be a major participant in whatever is done there, also a major beneficiary there. But a couple of things should be structured so that the game is played at a level situation.

Surcharges are perhaps a very appropriate way to do that, and I think there should be some limitations on that, i.e., a maximum of kilowatt hour or dollars per acre-foot, so as to assure the agencies it impacts some limitation on what their exposure may be, so they can plan in the future as well.

I think that also other parties should be brought into this, that may include the State Water Contractors, fishery interests can certainly benefit from the very substantial increases; over the years they have enjoyed in salmon fisheries, although it is partly declining, but the catch over the years has substantially increased, as to historical times.

And I think the Federal Treasury should be invited, as was suggested by Senator Burns, that there is some role of the general public enjoys that the Federal Treasury should pick up tabs.

With regard to some of the structures of the trust, let me suggest might revisit the membership structure. I think everyone here has talked about balance and I did not see an awful lot of balance there. There certainly is a need for a lot of expertise on that committee, but I think probably perhaps more important is some reason and logic in that and hope that can be endowed by appointments. But I fear it is going to take a lot of consideration to balance that committee to represent all interests and does not focus towards one thing. There are a lot of third, and even fourth impacts of whatever that trust does.

My final comment with regard to the CVP transfer advisory committee, I would recommend that committee to be expanded by one more party at least, and that would be a representative from Western Area Power Administration to represent that power interest. It is a very substantial element of the CVP. It is one that is paying its fair share, an unsubsidized fair share, and needs some representation on that because it is a very significant party in the picture of how the CVP operates.

I do believe that effort needs to be initiated and perhaps portions of this bill take some precedent over the final structuring of it. Perhaps one of those first things may be some of the fee structures, since you do have some assets to begin some efforts to plan and implement those programs.

With that I will conclude and thank you for the opportunity and hope that our comments have helped a small part to add to the ultimate wisdom of Congress. Thank you.

[The prepared statement of Mr. Felte follows:]

PREPARED STATEMENT OF STEVE FELTE, GENERAL MANAGER, CALAVERAS COUNTY WATER DISTRICT

My name is Steve Felte. I am General Manager of the Calaveras County Water District, a district which provides water and sewer service to the residents of Calaveras County, and also provides electrical power to other public agencies from hydroelectric projects. In addition, I serve as Chairman of the Board of the Calaveras Public Power Agency which receives federal power, which is then distributed to public agencies throughout the County.

Our interests are focused on two main issues: the proposed purpose of the plan to restore the impacts resulting from operation of the CVP; and the impacts of modifying the operation and resultant costs to users of CVP facilities.

Let me clarify that the water and power users which benefit from the CVP are appropriately the parties to assume the greater burden of mitigation costs. The intent is to assure a fair allocation of responsibility and to get the best value for each dollar and each acre-foot of water.

The legislation doesn't distinguish between mitigations and enhancements of the environment which should then follow with respective financial responsibility. There are clearly adverse impacts to fisheries, wildlife and water quality within the Central Valley for which the CVP is responsible. These should be more clearly defined and in conjunction with other responsible parties mitigated. Examples of other parties would include the State Water Project, the modifications of river channels particularly by delta levies, waste dischargers and the substantial increase of sport and commercial fishing.

Some of these parties are identifiable and should participate in the mitigation efforts while others are not, and thus the Federal Treasury should participate. With respect to those efforts which go beyond mitigation, i.e., enhancements, then the Treasury should be the major participant.

As a final point in regard to financial obligations, the concept of initiating surcharges on water and power use is sound. We suggest that in order to permit reasonable planning that limits be placed in terms of mills/kW or dollars/acre-feet for terms of 10-20 years.

With regard to the proposed plan, there are two major issues which should be further considered: (1) the likely conflicts between the Trust and existing purpose/users of CVP; and (2) the initiation of a plan without proper evaluation.

Many of the negative environmental impacts of the CVP are a direct result of not preparing an environmental impact statement. Congress adopted regulations in the early 1970's to correct this problem; and by directing activities or improvements without the benefit of an EIS, are we not going backwards?

The corrective efforts are not simple nor singular as evidenced by a recent suit by a sport fishing interest to stop California Fish & Game from making releases for salmon with possible negative impacts to other fisheries. The issues are complex, and entities with generally common interests will have differing views on implementation. This can in part be reduced by preparing a plan, in short, an EIS.

This same concern carries over to the make-up of the Board of Trustees for the Trust. The Board should be more diversified than "superior credentials in the preservation and restoration of natural biological diversity". As the organization structure suggests, the Trust operates in isolation of the secondary or competing impacts of their actions. The Board does need an abundance of expertise, as well as balance and common sense if these values can be endowed by an appointment.

The directives given to the Trust is without oversight and without balance. The Trust should operate within the same framework as any other party, providing for preparing plans, preparing an EIR, being open to public review and answerable to Congress.

The final section of the Bill proposes a CVP Transfer Advisory Committee which will be considering transfer of the CVP system to the State which is often considered a water facility transfer. The CVP has a significant element which pays its full share without subsidy but is not fully represented on the Committee. A representative from the Western Area Power Administration (WAPA) should be included on the Committee.

In summary, the issues which we believe deserve additional consideration by Congress are as follows:

1. Allocation of costs by all parties for mitigation and participation by Federal Treasury for enhancements.
2. Place a cap on surcharges to permit users reasonable opportunities to control and plan costs.
3. Restructure membership of Board of Trustees for the Trust and provide more structure for them to operate within.
4. Require proper planning and environmental review prior to implementing any plans.
5. Expand CVP Transfer Advisory Committee to include WAPA to recognize the power interests.

The need to initiate this task is important and should perhaps be started with imposing the surcharge while the details of implementing and structure are more fully explored.

Thank you for the opportunity to provide our input which may in some small part add to the ultimate wisdom of Congress.

Senator **Bradley**. Thank you very much, Mr. Felte.

Let me thank the whole committee. We have a very brief comment. I would like to get a couple of questions if I could, get some answers.

Mr. Somach and Mr. Hall, how much can you conserve? Mr. Hall says it is limited, the possibility is limited. What do you think you could conserve, 8 million acre-feet? How much can you conserve?

Mr. **Hall**. Mr. Bradley, I would look to the studies that have been done by independent sources. Most recently the State Water Resources Control Board, but also the Department of Water Resources and the University of California. Is my time already up?

Senator **Bradley**. No, no, no.

[Laughter.]

Senator **Burns**. That is just the District.

Mr. **Hall**. Those have all placed a range within the Central Valley and around 2 to 3 percent of the water used. Now, that is a significant amount of water because there is a lot of water used in the Central Valley in agriculture. But it is nowhere near what is needed to produce the kind of water that would provide the environmental restoration that you seek and meet urban needs.

The question is how can we better use the system to create the water at the times when it is needed. In dry years for urban areas and for critical fishery needs. And during springtime in the Delta when it is also critically needed.

There are improvements in the system through conjunctive use, through selected conservation programs——

Senator **Bradley**. If I could interrupt, you say 2 to 3 percent of the water used in the Central Valley.

Mr. **Hall**. Yes.

Senator **Bradley**. Not 2 to 3 percent of the water used from the Central Valley Project? Include all water?

Mr. **Hall**. Yes.

Senator **Bradley**. Could you give us some sense of what 2 to 3 percent——

Mr. **Hall**. I believe the total use is somewhere on the order of 25 million acre-feet.

Senator **Bradley**. So 2 to 3 percent of 25 million acre-feet.

Mr. **Hall**. That is right. Now, most of that, I should say, those three studies have all found the same thing, that the area of potential conservation that will produce that water is on the west side of the San Joaquin Valley in those drainage affected lands.

All other water that is used returns to the system, either in groundwater or in downstream flows.

Senator **Bradley**. And does this assume a particular price for the water?

Mr. **Hall**. No, it is simply that, the physical limitation of the system. All other water is recycled, in effect, and is reused.

Senator **Bradley**. Mr. Somach, do you have any——

Mr. **Somach**. The only thing I have to add to that at all is that I think the figure for the Central Valley Project, I am not sure exactly where the 25 million acre-foot figure Steve is using comes from, so we may be talking about two different things, but I think that the export to the San Joaquin Valley CVP is 3 million acre-feet, and the studies indicate that there is probably about 60,000 acre-feet of savings in that context when you go through those studies.

So those are the figures that I know of attributable to the Central Valley Project in the San Joaquin Valley.

Senator **Bradley**. So 3 million in Central Valley Project San Joaquin Valley of which you can save 60,000.

Mr. **Somach**. Yes, 60,000 acre-feet.

Senator **Bradley**. Okay. Let me ask Mr. Brown, because I found your—it is a threshold question. I mean, nobody expects that you can run a farming operation on year-to-year contracts. I mean, I do not expect that. But I also expect that no one would do that. They would take 20 years in order to get—and set aside 20 percent or some number thereof. That is where we want to head.

My question to you is would it make any difference if, in order to get a particular set-aside that you increase the years, the certainty. You got a contract for 30 years, 35 years, as opposed to 20 years, with the agreement that you would set aside a certain percent for fish and wildlife.

Mr. **Brown**. Well, that would certainly be much more acceptable——

Senator **Bradley**. So in other words, the longer you lock in, it is the certainty question. You cannot mandate set-aside, because this has got to be a decision made by individuals. And the question is how do we make it attractive for individuals to make a decision that enhances their chance certainly for water, and also avoids the possibility of a Federal court coming in and running this Central Valley Project because of endangered species violations.

That is the world we are operating in.

Mr. **Brown**. One of the unique things about the Western Farm Credit Bank and the National Farm Credit System is that we have been able to make loans up to 40 years. That sets us apart somewhat. We have not been able to do that in the past decade or so because of many different reasons.

One of the problems in dealing with just a 10- or 20-year loan under this proposal is that at the end of that 10 years do you give up another 20 percent or 10 percent for those, 1 percent for each year? That certainly was not clarified in this bill, so we could see eventually all the water disappearing.

Senator **Bradley**. It is 20 for 20, it is pretty clear.

Mr. **Brown**. All right, well, there is a lot of uncertainty even with working with a 10-year loan for mortgage purposes.

Senator **Bradley**. Okay. Let me ask Mr. Felte——

Mr. **Brown**. We would feel a lot more happy, much happier if we had longer periods to work with.

Senator **Bradley**. Let me ask Mr. Felte, you made the point that we ought to spell out a cap as opposed to simply saying a $30 million figure and that is on water and power and spell out a maximum cap. That means that we would have to spell out the maximum cap for power and a maximum cap for water.

Mr. **Felte**. Correct.

Senator **Bradley**. Now, you also say, I think you said that you thought that there should be other people paying in addition to the project users, meaning—does that mean you are in favor of non-Federal FERC approved power in the Valley being included in the surcharge?

Mr. **Felte**. It may very well be included, but do not stop your list there, either.

Senator **Bradley**. Okay, what else would you do? You would do that?

Mr. **Felte**. I would do that and I would also include State Water Contractors, the Delta levee people that have impacted the loss of wetlands. The salmon fisheries compared to fishery take 40 years ago to what they take today. It has substantially increased. There is something there.

The list is perhaps endless and if you cannot identify a participant, maybe even the State or the Federal Government should be the next participant.

Senator **Bradley**. Okay, thank you very much. Senator Burns.

Senator **Burns**. I have just a couple of questions. I want to make a point here that there is no relief from litigation in this bill. The citizens suit with impossible objections should and probably would guarantee Federal court intrusion. In other words, if this bill is not passed that does not guarantee that there is not going to be, that we are exempt from any Federal court coming in and telling us that we are not doing it right.

Also there is no relief from Federal environmental laws, the Clean Water Act, Endangered Specie Act, section 404 do not depend on Federal project deliveries.

So let us make that point up front real close because that is one of the shortcomings of this piece of legislation.

I would also, Mr. Brown, to follow up on the chairman's question, would you consider some sort of a sliding scale or longer period for contract to accept a 20-percent cutback. I would ask the chairman, maybe, can we figure out a way that we just do not absolutely go out there and take that big bite on the first jump. Maybe we could also slide the set-aside.

Also it never occurred to me until right now, if you want to slide it up, in other words we will set aside 5 percent, maintain the base, and operate from the same base so that we are not asked to give up more than 20 percent over the life of the contract and let it phase in over 25 or 30 years.

Senator **Bradley**. I can assure the Senator that there is always flexibility.

Senator **Burns**. I am glad you are playing man to man now, you are not playing zone, that is what I like.

[Laughter.]

Senator **Burns**. So I wonder if that might be acceptable if we can come to terms with some of these marginal acres that maybe should be set aside in the first place.

Mr. **Brown**. Right, well, we do not have a strong in-house policy dealing with this matter. We want to see how these provisions are going to affect individuals and to the extent that the credit is not available to them, then it hurts everyone.

We would try to work with you to accomplish any kind of a proposal that would minimize impacts on the borrowers we serve.

Senator **Burns**. Mr. Somach, do you want to comment?

Mr. **Somach**. Yes, the discussion is focusing upon either a surcharge of money or a surcharge of water to theoretically serve certain purposes.

One of the problems we feel with the legislation, itself, is that in fact those protections, what you would use that money and that water for are in fact illusory. They are not spelled out, they are not delineated. They are not talked about in the legislation at all.

So what you really have is the worst of all possible circumstances, you have water and money being taken away, but not directed in any way, shape or form. And what you really do then is then you put yourself in the position where those citizen suit provisions really give the Federal court money and water to be able to be utilized in order to control the Central Valley Project as opposed to the way it ought to be.

That is the nature of the proposal that we offer is to focus on the problems and the solutions for those problems, as opposed to merely just taking water and money away from water users.

Senator **Burns**. Thank you.

Senator **Bradley**. Thank you very much, Senator Burns. Let me thank Mr. Somach in particular for his last comment, because I do think that there are clearly ways that we can avoid the citizen suit provision, as I assured Senator Seymour earlier from leading to the kind of situation that you have alluded to, which is judicial control of the water. We do not want that. Nobody wants that.

I think that we can address that quite clearly. I do not see it as an insolvable problem at all.

Let me thank the entire panel for your presentations. They have been very helpful. There have been any number of suggestions that have come out of this hearing today that I think will play a major role in further development of this bill.

Let me thank the Ways and Means Committee for their willingness to allow us to use this room and go over.

In particular I want to express my apologies to Jim Costa and Bill Jones, I see Jim and Bill Jones and Bob Vice who were on the last panel and who did not get to testify.

We have had the wisdom of both Jim and Bill in previous hearings, so that I do not think that the committee is shortchanged. And we will continue to work with all parties.

I appreciate your testimony and also your continued concern. Our door is always open for consultation on how we can make this bill better. And the subcommittee and this hearing is now concluded and adjourned.

[Whereupon, at 1:35 p.m., the hearing was adjourned.]

APPENDIXES

APPENDIX I

Responses to Additional Questions

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, DC, July 16, 1991.

Hon. BILL BRADLEY,
Committee on Energy and Natural Resources, U.S. Senate, Washington DC.

DEAR MR. CHAIRMAN: Your letter of May 14, 1991, asked several questions as follow-up to my testimony on May 8, 1991, before the Water and Power Subcommittee. The following is my response to these additional questions. For your convenience the questions are repeated.

Question 1. Assuming that the Federal government can protect its repayment interests, should the Federal government impose geographic restrictions on the transferability of CVP water? Isn't this a matter that should be left to the state?

Answer. The answer to both parts of the question is a qualified "yes." It is our view that the terms and conditions established in the water permitting process are a matter of State primacy. State desires should be the primary determinant in the nature and the extent of the use of water resources within the State. However, to protect the significant Federal investment made in accordance with directives from the Congress in the form of project authorizing legislation, which anticipated accomplishing specific project purposes, it may not be in the best interest of the United States to allow total discretion for determination of project accomplishment to rest with the State. Allowing the State to significantly alter the intended purposes of a project, or possibly abandon it, should require Federal review and consent.

Question 2. What restrictions has the Bureau imposed on the transferability of pre-project water rights through the mechanism of the so-called CVP "exchange contracts?" Can an exchange contractor sell his or her water to CVP project water contractors? How about to growers or others outside the CVP? Do the same restrictions apply to both the Friant Unit exchange contractors and the Sacramento River water rights holders? If not, what are the differences? Please provide representative examples of the two types of contracts and describe in full the features of those contracts which affect water transfers.

Answer. The "exchange contract" is an obligation of the United States to provide a substitute water supply to water users in an area along the San Joaquin River (River) where water has historically been diverted from the River under established rights. Article 6 of the contract between the users and the United States, Area of use of Substitute Water, specifically designates the areas in which the substitute water supply can be used. In the absence of a transfer provision in the contract, it is Reclamation's position that the water may only be used in the designated areas and transfers are not authorized. The contracts must be amended to accommodate water transfers. Under the existing exchange contracts, the water users are not subject to the acreage limitation provisions of the Reclamation Reform Act (RRA) of 1982; however, if the contracts were amended to accommodate transfers, circumstances could exist whereby some, or all, water users within the contract service area would become subject to the RRA.

The Sacramento River Water Right Settlement Contracts (settlement contracts) recognize the rights of water users along the Sacramento River, and establish the water users obligation to pay for the benefits provided by the CVP. These contracts specify the water quantities recognized as water right water (base supply) and supplemental CVP water (project supply). These contracts also designate a specific service area, but unlike the "exchange contracts" they contain a provision that allows for the transfer of water to others with the approval of the United States. The Sacramento River diverters with settlement contracts formed an association in 1974 to facilitate the transfer of project water among themselves. An agreement with Reclamation provides that the United States is not required to approve transfers among members of the association.

Reclamation's interpretation of the California water code regarding transfers is that the water must be beneficially used in one area and that the use must be given up in that area before it can be transferred to another area. The definition of beneficial use would include some system losses. In addition to the considerations for the laws of California, the Department of the Interior policy on voluntary water transfers includes the consideration of adverse third party impacts. It is Reclamation's position that the transfer of water that has not been used (paper water) will not be approved. Allowing "paper water" to be transferred adversely impacts all other project beneficiaries. When the water obligated under the contract has not been used historically on the lands delineated in the contract, it remains available to the project to meet other project purposes.

Question 3. What is the character of the property interest held by CVP project growers in the water they receive from the CVP?

Answer. The Supreme Court has determined that for water rights obtained by the Bureau of Reclamation in the name of the United States, the water user who puts the project water to beneficial use obtains a vested property interest in the water right. See *Ickes* v. *Fox*, 300 U.S. 82 (1936), *Nebraska* v. *Wyoming*, 325 U.S. 589 (1945), and *Nevada* v. *United States*, 463 U.S. 110 (1983). In the CVP, the United States acquired water rights through purchase or through permits issued by the State, and holds those rights in the name of the United States. Thus, the United States holds the legal title to the water, but the beneficial title rests with those who put the water to beneficial use.

Question 4. Can you think of any Federal reason why the Secretary should not be expressly empowered by Congress to operate the CVP for all purposes recognized as beneficial under California law?

Answer. The Department of the Interior has frequently stated the position that projects, such as the CVP, which involve only intrastate waters should be operated in accordance with State priorities and determinations of beneficial use.

Project repayment, however, is a legitimate Federal interest that would have to be addressed in any legislation to alter the project's purposes. In short, such a change in project authorization or purpose would have to contain provisions to assure that repayment is not adversely affected.

Question 5. You testified that the Bureau has full authority and direction to operate the CVP for fish and wildlife. Yet the Bureau has, on prior occasions, made contradictory statements in this regard. Please provide all Solicitor's opinions or other documents which support your assertion of authority and direction. Please provide the following specific information, as well:

a. Identify all limits on your authority to operate the CVP for fish and wildlife.

Answer. Applicable Solicitor's Opinions are enclosed. As they indicate, the CVP was reauthorized as a Reclamation project under the Act of August 26, 1937 (50 Stat. 844). That statute, after stating the general purposes for which the CVP was authorized, added the proviso that:

> . . . the said dam and reservoir shall be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and third, for power.

That statute was subsequently amended by the Act of August 27, 1954, which provided:

> The entire Central Valley Project, California, heretofore authorized under the Act of August 26, 1937, . . ., is hereby reauthorized and declared to be for the purposes set forth in said Acts, and also for the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable under said Acts. (68 Stat. 879, 16 U.S.C. 695d)

In addition, the Reclamation Project Act of 1939 authorized the Secretary to enter into contracts to furnish water for municipal water supply or miscellaneous purposes. That authorization, however, was qualified with the provision that "no contract relating to municipal water supply or miscellaneous purposes or to electric power or power privileges shall be made unless, in the judgment of the Secretary, it will not impair the efficiency of the project for irrigation purposes." (53 Stat. 1194; 43 U.S.C. 485h(c)).

As a result, the Secretary is authorized to provide water for fish and wildlife purposes from the CVP. Those deliveries, however, are subordinate to the purposes established in the earlier CVP authorizations. Interior has not interpreted the priorities listed in the 1937 Act as absolute priorities, but instead, has viewed them as the overall priorities for the project that may or may not limit the Secretary's discretion to enter into a specific contract for CVP water.

b. Identify all CVP project purposes which you are obligated to serve prior to serving fish and wildlife.

Answer. As indicated above, the Secretary must meet the overall priorities of the CVP as set out in the previously referenced statutes. Those priorities do not, however, require the Secretary to subject allocations of water for second or third priority uses to later reductions for reallocation to a higher priority. Instead, Reclamation views them as overall priorities for the project as a whole, in which one priority is not sacrificed for another.

c. Does the Bureau have authority to enter into long-term CVP water contracts for fish and wildlife? If so, identify any limits on the entities with whom the Bureau may contract and the price or prices at which the Bureau would make water available under contract. If the Bureau does not have authority to enter into long-term water contracts for fish and wildlife, please explain in full why not.

Answer. The Bureau does have authority to enter into long-term CVP contracts for fish and wildlife purposes, under the authorities granted by the statutes stated above. Limitations on the appropriate contracting entity and price are dependent on the CVP facilities or services needed to provide the water pursuant to the contracts.

d. Does the Bureau have authority to enter into long term contracts or other arrangements to supply CVP project power for fish and wildlife purposes? If so, identify any limits on the entities to whom the Bureau may supply project power for fish and wildlife and the price or prices at which the Bureau would make power. If the Bureau does not have authority to make power available for fish and wildlife, please explain in full why not.

Answer. So long as fish and wildlife purposes are an authorized purpose of the CVP, which we believe them to be, the Bureau is authorized to provide project use power, if needed, to provide water for fish and wildlife purposes. To determine whether the cost of such project use power is reimbursable, however, requires an examination of the authorizations for the specific units of the CVP. On the other hand, the Western Area Power Administration, not Reclamation, is authorized to market surplus power from the CVP. Therefore, if your question refers to surplus power rather than power needed to fulfill the purposes of the CVP, Reclamation would not be authorized to enter into such contracts.

Question 6. Has the Bureau ever denied a request from the State of California to change operations of the CVP on the grounds that the Bureau lacked adequate authority to comply? Please identify and explain all such instances.

Answer. Without an extensive search of historical records, we know of no such incident.

Question 7. Has the Bureau ever denied a request from the U.S. Fish and Wildlife Service to provide water for fish and wildlife? If so, please identify and explain all such instances.

Answer. Yes, the Bureau has not been able to enter into long-term contracts for water with the Fish and Wildlife Service because of the requirements for NEPA compliance, congressional restrictions on new contracts, and questions regarding reimbursement for the water. In recent years, the Bureau has met all other requests except during periods of drought when all users experienced reductions in deliveries. During these periods, hardship water has been provided for fish and wildlife purposes to supplement the reduced deliveries.

Question 8. Would the Administration support legislation that authorized the Bureau to purchase some or all of the water needed to restore Sacramento and San Joaquin River fisheries?

Answer. Additional water will probably be necessary to restore the Sacramento and San Joaquin River fisheries, and purchase is one option. However, we would like to defer offering an opinion on the source of the water until the ongoing studies on the San Joaquin and Sacramento Rivers are concluded. There is a great deal of additional information being developed by these studies which we believe will contribute to well informed decisions.

Question 9. Would the Administration support legislation that authorized the Bureau to buy some or all of the farmlands (or conservation easements on the farmlands) on the west side of the San Joaquin Valley which have drainage problems, and retire or change management on those lands?

Answer. The interagency San Joaquin Valley Drainage Program included the issue of land retirement, or alternative land use, in its recommended plan for management of drainage problems in the western San Joaquin Valley. This feature of the plan is considered a "last resort" option for the most problematical lands for which the provision of drainage is either very costly or prohibitive.

Question 10. Would the Administration support legislation that authorized the Bureau to develop additional water supplies in the Central Valley which would increase the firm yield of the CVP so as to help meet fish and wildlife or other water needs?

Answer. Reclamation has expended considerable resources attempting to quantify the firm yield of the CVP. The finalization of hydrological modeling by the State of California and Reclamation should provide a documented firm yield. Once that is determined, the needs for additional water supplies can be estimated. Reclamation would then attempt to develop criteria for determining how those needs can best be met.

A key element of any increase in the CVP firm yield through additional projects would be conjunctive use of the Central Valley's water resources. Studies to delineate the availability of ground water are available in some areas, and underway in others. The use of ground-water resources and existing surface supplies could minimize the need for costly surface water reservoirs for additional water supplies. Any specific legislative proposal would have to be reviewed in light of these ongoing studies.

If we can be of further assistance in this matter, please contact this office at any time.

Sincerely,

DENNIS B. UNDERWOOD,
Commissioner.

[Enclosures.]

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

file
Central
Valley Project

DEC 7 1979

Memorandum

To: Assistant Secretary, Land and Water Resources

From: Solicitor

Subject: Proposed Contract with Grasslands Water District

A question has been raised whether the Department may amend its contract with the Grasslands Water District in the Central Valley Project (CVP) to provide that, in critically dry years, the District be accorded equal priority with agricultural contractors. The District is usually delivered 50,000 acre-feet of water primarily for waterfowl management, under the terms of the Act of August 27, 1954, Pub. L. No. 83-674, 68 Stat. 879, 16 U.S.C. § 695d, et seq., which was recently amended by the Fish and Wildlife Improvement Act of 1978, Pub. L. No. 95-616, 92 Stat. 3115.

The question is whether equal priority is consistent with the applicable CVP authorizations which establish general categories of priorities for CVP operations, as follows: (1) river regulation, improvement of navigation, and flood control; (2) irrigation and "domestic uses;" (3) power; and (4) fish and wildlife and "other beneficial uses."[1]

The 1954 Act provides that the "entire Central Valley Project" theretofore authorized and reauthorized, "is hereby reauthorized and declared to be for the purposes set forth in said acts, and also for the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable [under previous authorizations]." One of my predecessors held that the express reference to the use of waters for fish and wildlife in the 1954 Act is "simply a more definitive specification" of "other beneficial uses" which were an authorized project purpose (and lowest priority) ever since the 1937 reauthorization of the project. See 50 Stat. 844, 850; Opinion by Acting Solicitor Armstrong, "Allocations for fish and wildlife conservation on Central Valley Project," Nov. 15, 1954, p. 3. The Solicitor went on to point out: "The condition in [section 1 of] Public Law 674 that the use of such waters for wildlife conservation purposes shall be subject to such priorities as are applicable under prior authorizations also is simply a specific recognition by the Congress of the existence of the priorities originally specified."

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[1] See Pub. L. No. 75-392, 50 Stat. 844 (Aug. 26, 1937).

I agree with and reaffirm this opinion. It does not, however, directly address the question here presented. For the same reason the provisions of section 6 of the 1954 Act, which authorized contracts to supply CVP water to certain wildlife areas on an "if and when available" basis, begs the question presented here of how much water can be made "available" by the Secretary under general CVP priorities. As noted above, the 1954 Act was amended in 1978, but in a way not relevant here.

A narrow, technical reading of the CVP statutory priorities might suggest that in every situation throughout the CVP deficiencies shared equally by irrigation and fish and wildlife are unlawful; in other words, to require that a higher priority must be totally satisfied before a lower one can be met. I am unaware of any legislative history of CVP statutory authorities which supports such a theory.

The Secretary has never applied the priorities or operated the project that way. Rather, the allocation of relative shortages or benefits among priorities in any specific situation has been regarded as a discretionary matter within the Secretary's judgment.

For example, this kind of narrow interpretation — placing total emphasis on flood control (the highest priority) — would reduce water storage in reservoirs for irrigation. Maximizing flood protection would dictate that reservoirs be kept nearly empty certain times of the year in the event massive precipitation and runoff occurred. Operation that way would limit storage of water for irrigation and other uses later in the year. But reservoirs are not operated to wring every conceivable bit of flood storage capability out of the storage space; instead, they are operated according to Corps of Engineers criteria which strike a reasonable balance between the need for stored water and the remote possibility of huge storms.

To give a specific example, the Folsom Reservoir on the American River above Sacramento is not sufficient, in the judgment of the Corps of Engineers and the Bureau, to protect Sacramento from the worst conceivable flood (the so-called "standard project flood"). Additional flood control is one justification for the proposed Auburn dam, authorized to be built upstream from Folsom. Yet Folsom reservoir is not, in advance of completion of the Auburn dam, kept at its lowest possible storage level in the spring even though additional protection from an unexpected, and highly improbable, standard project flood (estimated to occur once every thousand years) might be obtained if it were.2/

To take another example, many CVP contracts provide that municipal and industrial uses are cut in critically dry years after irrigation is cut, even though irrigation and "domestic uses" are of equal statutory priority. To take a third, more immediate example, in the 1976-77 drought Grasslands was delivered water on an equal priority with municipal and industrial users, and ahead of irrigators, because of very serious threat to migratory waterfowl.

Operating a huge, multi-purpose project like the CVP is a complicated undertaking, which precludes applying the order of priorities in any individual situation in an absolute, inflexible way. Rather, the Bureau has strived to coordinate disparate functions in a way which serves them all in the project as a whole, while maintaining a balance which fairly reflects the authorized priorities of purpose. The fact that Congress has typically provided, in adding new features to the project, that the new features shall be integrated into the overall project reinforces this view that it is the project as a whole which supplies the context for applying the statutory priorities.3/

On occasion the Congress has specifically limited the Secretary's discretion in meeting the general CVP priorities. For example, in authorizing the Trinity River Division of the CVP in 1955, Congress specifically provided that in-basin flows (in excess of a statutorily prescribed minimum) determined by the Secretary to be necessary to meet in-basin needs take precedence over needs to be served by out-of-basin diversion. See Pub. L. No. 84-386, §2. In that case, Congress'

2/ While Congress specifically provided that the Auburn Project be operated for flood control in accordance with Corps of Engineers criteria, 43 U.S.C. § 616bbb, Congress made no such direction in the Folsom authorization. See 58 Stat. 900.

3/ See, e.g., Pub. L. No. 84-386, 69 Stat. 719 (Aug. 12, 1955) (Trinity River Division authorization), § 2, 43 U.S.C. § 616bbb; Pub. L. No. 89-161, 79 Stat. 615 (Sept. 2, 1965) (Auburn-Folsom South Unit authorization), § 2. The Auburn-Folsom South provision is typical, providing in pertinent part that the unit be "integrated and coordinated, from both a financial and an operational standpoint, with the operation of other features of the Central Valley project . . . in such manner as will effectuate the fullest, most beneficial, and most economic utilization of the water resources hereby made available." 43 U.S.C. § 616bbb.

usual direction that the Trinity River Division be integrated into the overall CVP, set forth at the beginning of section 2, is expressly modified by and made subject to the provisos that follow giving specific direction to the Secretary regarding in-basin needs.

Applying the general statutory priorities in the context of the project as a whole accords both with past practice and Congress' intent. The priorities have meaning in the sense that it would be improper for the Secretary to devote most CVP-stored water primarily to power production or fish and wildlife protection while shorting other purposes of a higher priority. The record shows that the vast bulk of the CVP yield of nearly 8 million acre-feet is devoted to irrigation and other uses of a higher statutory plane than fish and wildlife protection. Thus the statutory priorities are fairly being met, even if they have not slavishly dictated every individual decision in the thousands of operating judgments that must be made in a project this large and complex.

In short, the congressional priorities must not be applied in the context of a single contract or a single small facet of an enormous project, but from the perspective of project operation as a whole. For this reason, it is plain that the Grasslands contract is consistent with the statutory priorities.

Leo Krulitz
SOLICITOR

file CVP: fish & Wildlife Purposes

RECEIVED
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SEE MEMO OF APRIL 14, 1977

United States Department of the Inter
OFFICE OF THE SOLICITOR
SACRAMENTO REGION
2800 COTTAGE WAY
ROOM E-2753
SACRAMENTO, CALIFORNIA 95825

JUN 17 1977

To: Regional Director, Bureau of Reclamation
Attention: MP-440

From: Regional Solicitor

Subject: Fish and Wildlife Purposes and the Central Valley Project

In response to your memorandum of May 12, 1977, we are submitting the following opinion.

The Fish and Wildlife Coordination Act had its origin in the Act of March 10, 1934 (P.L. 73-121; 48 Stat. 401). This Act was amended by the Act of August 14, 1946 (P.L. 79-732; 60 Stat. 1080) and by the Act of August 12, 1958 (P.L. 85-624; 72 Stat. 563). The Act is codified in 16 U.S.C. 661, et seq.

The pertinent portions of the 1934 Act are as follows:

"Sec. 3(a) Whenever the Federal Government through the Bureau of Reclamation or otherwise, impounds water for any use, opportunity shall be given to the Bureau of Fisheries and/or the Bureau of Biological Survey to make such uses of the impounded waters for fish-culture stations and migratory-bird resting and nesting areas as are not inconsistent with the primary use of the waters. . . ."

" (b) Hereafter, when any dam is authorized to be constructed, either by the Federal Government itself or by any private agency under Government permit, the Bureau of Fisheries shall be consulted, and before such construction is begun or permit granted, when deemed necessary, due and adequate provision, if economically practicable, shall be made for the migration of fish life from the upper to the lower and from the lower to the upper waters of said dam by means of fish lifts, ladders, or other devices."

Congress enacted P.L. 75-392 (50 Stat. 844) in 1937, authorizing the Secretary of the Interior to construct the CVP subject to reclamation laws.

Shasta Dam, Friant Dam and the Tracy Pumping Plant were all substantially completed and in operation prior to the 1946 amendment to the Fish and Wildlife Coordination Act. The facilities would be subject to the terms and conditions of the 1934 Act. This Act merely allowed use of impounded water for fish culture stations and bird nesting areas, but such use could not be inconsistent with the primary use of the waters, which uses were specified in P.L. 75-392 and are quoted in our April 14, 1977 memorandum.

Folsom Dam on the American River was originally authorized for construction by the Corps of Engineers in 1944. In 1949, Congress enacted P.L. 81-356 (63 Stat. 852). This Act reauthorized the CVP to include the American River Development which included Folsom. We are of the opinion that the reauthorization brought the American River Division within the terms of P.L. 79-732 dated August 14, 1946. Other facilities of the CVP authorized between 1946 and 1953 and subject to P.L. 79-732 are the Sacramento Valley Unit and the Trinity River Division.

P.L. 79-732 provided in Section 2 that whenever the waters of any stream or other body of water are authorized to be impounded or diverted by any agency of the United States, that agency will consult with the Fish and Wildlife Service and the head of the State agency exercising administration over wildlife with a view to preventing loss of, or damage to, fish and wildlife. Any surveys or investigations by Fish and Wildlife and the State agency were required to be made a part of the report submitted by the constructing agency.

Section 3 of the 1946 Act provided that, consistent with the primary purposes of the impoundment, diversion or control of the waters, provision shall be made for the use thereof for the conservation, maintenance and management of wildlife resources thereof and its habitat thereon. Section 3 then goes on to state:

> "In accordance with general plans, covering the use of such waters and other interests for these purposes, approved jointly by the head of the department or agency exercising primary administration thereof, the Secretary of the Interior, and the head of the agency exercising administration over the wildlife resources of the State wherein the waters and areas lie, such waters and other interests shall be made available without cost for administration (a) by such State agency, if the management thereof for the conservation of wildlife relates to other than migratory birds; (b) by the Secretary of the Interior, if the waters and other interests have particular value in carrying out the national migratory bird management program."

This latter portion must be read in context with the entire paragraph. It means that the use of the water is subject to the primary purposes of the impoundments and diversions. The language also makes it clear that the Act is intended to be prospective and not retroactive since it goes to the general plans of the project and the reports by the construction agency (which we construe to be feasibility reports).

The Trinity River Division and the Sacramento Valley Unit as well as the American River Division all were planned, constructed and operated (the Sacramento Valley Unit is not fully completed) under and in accordance with the Fish and Wildlife Coordination Act. The Trinity River Division authorization provided for release of 120,000 acre-feet of water for fish and wildlife purposes. The Sacramento Valley Unit includes a multi-million dollar fish facility. The American River Division is operated to provide flows of 250 ft^3/s to 500 ft^3/s in the American River in accordance with an agreement with the State Fish and Game Department. It also has a fish hatchery at Nimbus.

The facilities of the CVP authorized and/or constructed prior to 1950 were in accordance with the Fish and Wildlife Coordination Act and provision was made for conservation of fish and wildlife consistent with the primary purposes of the CVP. Parenthetically we would add that the United States District Court in *Sierra Club, et al. v. Morton*, Civil No. 71-580-CBR, found that the Fish and Wildlife Coordination Act has been fully complied with in the operation of the CVP.

The final amendment to the Fish and Wildlife Coordination Act was in 1958. The only authorizations since that date have been the San Luis Unit, the Auburn-Folsom South Unit and the San Felipe Division. None of these Acts reauthorized the CVP and, with the exception of the Auburn-Folsom South Unit, they did not develop any additional water nor did they impound any additional water for diversion. They were studied and reported on in accordance with the 1958 amendment. See *Sierra Club* v. *Morton* (Supra). Other than for mitigation purposes the Act provides that adequate provisions shall be made for the use of the water in connection with conservation, maintenance and management of wildlife resources consistent with the primary purposes of the project.

In preparing our April 14, 1977 memorandum we were cognizant of and considered the Fish and Wildlife Coordination Act in reaching our conclusions and so stated in several of our working drafts; unfortunately, the final draft did not contain a reference to the Act. Consequently, this memorandum should be considered as an addendum to our April 14th memorandum and Fish and Wildlife Service is so advised by copy hereof.

In summary then, the conclusions reached in our April 14, 1977 memorandum are confirmed as more fully amplified in this addendum. Thus, where it is determined not to be inconsistent with the primary purposes of a project, the Bureau may provide water for fish and wildlife purposes over and above that required for necessary mitigation.

We assume that, in committing 105,000 acre-feet to the refuges referred to in your May 12th memorandum, a determination was made that delivery of this water would be "consistent with the primary purposes of the CVP". Upon such assumption the commitment would have an equal footing with other water service commitments.

Charles R. Renda

Charles R. Renda
Regional Solicitor
Sacramento Region

Copy to: Field Supervisor, FWS, Sacramento
Acting Assoc. Solicitor, Energy & Resources, Washington, D.C.
(each w/c of April 14 & May 12 memos)

JMBordenkircher:dg

SUPPLEMENTED BY MEMO OF JUNE 17, 1977

United States Department of the Interior
OFFICE OF THE SOLICITOR
SACRAMENTO REGION
2800 COTTAGE WAY
ROOM E-2753
SACRAMENTO, CALIFORNIA 95825

APR 14 1977

To: Field Supervisor, Division of Ecological Services, Fish and Wildlife Services, Sacramento

From: Regional Solicitor

Subject: Fish and Wildlife Purposes and the Central Valley Project

Your memorandum dated March 23, 1977, requests advice as to whether or not use of Central Valley Project water for fish and wildlife conservation purposes is an authorized purpose of the CVP. In responding to this inquiry it is necessary to review all legislation relating to CVP and the legislative history of those Acts which require legal interpretation.

The River and Harbor Act of 1935 (49 Stat. 1028, 1038) contained the initial authorization for the Central Valley Project Works. This initial authorization provided for construction by the Corps of Engineers. In 1937, Congress passed P.L. 75-392 dated August 26, 1937 (50 Stat. 844) which reauthorized the CVP for construction by the Secretary of the Interior and made it subject to the reclamation laws. This Act provided that the CVP:

> ". . .is hereby reauthorized and declared to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored water thereof. . ., for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings. . . ."

the Act then goes on to provide:

> "That the said dam and reservoirs shall be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and, third, for power."

A careful reading of the 1937 Act fails to disclose language authorizing the use of project water for fish and wildlife conservation purposes.

Nor have we been able to find language in the legislative history of the Act that could serve as a basis for a conclusion that the Congress intended that fish and wildlife conservation be a project purpose and function.

The Act of August 26, 1937 was first amended by P.L. 76-868 dated October 17, 1940 (54 Stat. 1199) which amendment added the following to the authorized purposes of the CVP:

> ". . .for the construction under the provisions of the Federal reclamation laws of such distribution systems as the Secretary of the Interior deems necessary in connection with lands for which said stored waters are to be delivered."

The purpose of this amendment, as can be seen, was merely to add certain features to the already existing project.

The next Congressional enactment relating to the CVP is found in P.L. 77-198 dated July 30, 1941 (55 Stat. 612) and is entitled An Act for the Acquisition of Indian Lands for the Central Valley Project, and for Other Purposes. This legislation did not amend or in any manner change the previously authorized purposes of the CVP. It merely provided for acquisition of Indian lands necessary for project purposes and functions.

Folsom Dam on the American River was first authorized for construction by the Corps of Engineers by the Flood Control Act of 1944, P.L. 78-534, dated December 22, 1944 (58 Stat. 887). It was initially authorized with a reservoir capacity of only 355,000 acre-feet and was for flood control only without irrigation or power facilites other than penstocks. After the project was authorized and prior to any appropriations for construction it was agreed by the Corps, the Bureau of Reclamation and the State that it should be enlarged and built as a multiple-purpose project for flood control, irrigation, power and other beneficial uses. On January 12, 1948, the President of the United States sent a special message to Congress specifically recommending: (1) that the present authorization be expanded to a million acre-feet and that provision be made for transfer of the dam and reservoir, when construction was completed by the Army engineers, to the Bureau of Reclamation for operation and maintenance as a coordinated part of the Central Valley Project under the Federal reclamation laws; (2) construction by the Bureau of Reclamation of a powerplant, afterbay, and necessary transmission lines; and (3) construction by the Bureau of Reclamation of irrigation canals and related works needed to deliver water to irrigation districts, cities, and suburban areas.

On October 14, 1949, Congress enacted the American River Act P.L. 81-356 (63 Stat. 852). This Act stated that the Central Valley Project authorized by Section 2 of the Act of August 26, 1937 was reauthorized to include the American River Development, which development was declared to be for the same purposes as described in the 1937 Act. The American River development was declared to consist of, among other features, Folsom Dam and Reservoir. In obtaining water rights for this project the Bureau of Reclamation entered into an agreement with the State Department of Fish and Game whereby the bureau, as a part of its operation, agreed to maintain flows of 250 ft^3/s and 500 ft^3/s at certain periods of the year in the Lower American River. This agreement is still in effect and is a legal obligation of the bureau in operating the American River Division of the CVP.

New Melones Dam on the Stanislaus River was also authorized as a Corps of Engineers project for flood control purposes by the Flood Control Act of 1944. This authorization was amended by the Flood Control Act of 1962, P.L. 87-874, dated October 23, 1962 (76 Stat. 1173). The appropriate portions of that Act are as follows:

> ". . .upon completion of construction of the dam and powerplant by the Corps of Engineers, the project shall become an integral part of the Central Valley project and be operated and maintained by the Secretary of the Interior pursuant to the Federal reclamation laws, except that the flood control operation of the project shall be in accordance with the rules and regulations prescribed by the Secretary of the Army. . .That the Secretary of the Army adopt appropriate measures to insure the preservation and propagation of fish and wildlife in the New Melones project and shall allocate to the preservation and propagation of fish and wildlife, as provided in the Act of August 14, 1946 (60 Stat. 1080), an appropriate share of the cost of constructing the Stanislaus River division and of operating and maintaining the same."

It should be noted that this legislation did not reauthorize the CVP, but merely provided that the project would become an integral part of the CVP. It also contained the unique provision, cited above, relating to preservation and propagation of fish and wildlife in the New Melones Project. The language of the Act is clear and unambiguous that the fish and wildlife provision is applicable only to the "New Melones project" and not to the CVP as a whole. It is our understanding that a determination has been made regarding releases from New Melones Dam for fish and wildlife purposes.

We might mention here that Black Butte Reservoir was also authorized under the Flood Control Act of 1944 and was subsequently integrated into the CVP without a reauthorization of the CVP.

The next Congressional enactment relevent to this discussion was P.L. 81-839, dated September 26, 1949 (64 Stat. 1036) known as the Sacramento Valley Canals Act. This Act authorized the construction of the Tehama-

Colusa Canal through Tehama, Glenn and Colusa Counties to permit the most effective irrigation of the irrigable lands lying in the vicinity of the canal and to supply water for industrial, domestic and other beneficial uses in the three counties. The Act reauthorized the CVP (using the existing language) as follows:

> "That the entire Central Valley project heretofore authorized under the Act of October 26, 1937 (50 Stat. 844, 850), and the Act of October 17, 1940 (54 Stat. 1198, 1199), is hereby reauthorized and declared to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage and for the delivery of the stored waters thereof, for construction under the provisions of the Federal reclamation laws of such distribution systems as the Secretary of the Interior deems necessary in connection with lands for which said stored waters are to be delivered, for the reclamation of arid and semiarid lands and lands of Indian reservations, and other beneficial uses, and for the generation and sale of electric energy as a means of financially aiding and assisting such undertakings, and in order to permit the full utilization of the works constructed to accomplish the aforesaid purposes."

On August 27, 1954, Congress enacted P.L. 83-674 (68 Stat. 879) entitled "An Act to Authorize Works for Development and Furnishing of Water Supplies for Waterfowl Management, Central Valley Project, California". It is apparent that Congress up to that time recognized that use of water for fish and wildlife purposes was not an authorized project function or purpose of the CVP since Section 1 of the Act reads as follows:

> "The entire Central Valley project, California, heretofore authorized under the Act of August 26, 1937 (50 Stat. 844, 850), and reauthorized under the Act of October 17, 1940 (54 Stat. 1198, 1199), the Act of October 14, 1949 (63 Stat. 852), and the Act of September 26, 1950 (64 Stat. 1036), is hereby reauthorized and declared to be for the purposes set forth in said Acts, *and also for the use of the waters thereof for fish and wildlife purposes*, subject to such priorities as are applicable under said Acts." (Emphasis added).

We must, however, read this Section in conjunction with the remaining sections of the Act and in the light of the legislative history of the Act to determine the meaning and scope of the reauthorization. The legislative history of the Act is found in Senate Report No. 1786. This Report contains the following language:

> "This bill has two purposes: (1) To provide for works to furnish a water supply on State of California and Federal waterfowl management areas; and (2) to permit the Secretary of the Interior to sell water for waterfowl purposes to water districts and other public agencies when the water is surplus to agricultural, domestic, and municipal needs as specified in the priorities established under State law."

It goes on to state:

> ". . .that deliveries of water from the Central Valley project for waterfowl purposes is to be subordinate to the priority of deliveries of water for agricultural purposes."

The report of the Fish and Wildlife Service under date of May 28, 1954 to the Subcommittee on Irrigation and Reclamation contained identical language to that quoted above in reference to the purposes of the bill. In the light of the legislative history of the Act and the language of Sections 2 through 7, we are of the opinion that this Act can be construed, not as a general reauthorization of the CVP for fish and wildlife conservation purposes, but rather, a clearly limited authority for the Secretary to construct, operate and maintain works on waterfowl management areas and refuges owned by the State and the United States and, subject to priorities for other project purposes, to sell CVP surplus water for waterfowl purposes.

The Trinity River Division of the Central Valley Project was authorized by P.L. 84-386 dated August 12, 1955 (69 Stat. 719). This legislation did not reauthorize the CVP. It provided that the Secretary "is authorized to construct, operate, and maintain, as an addition to and an integral part of the Central Valley project, California, the Trinity River division. . . ." It further provided that the operation of the Trinity River division "shall be integrated and coordinated, from both a financial and an operational standpoint, with the operation of other features of the Central Valley project, as presently authorized and as may in the future be authorized by Act of Congress. . . ." (emphasis added). The Act also provides that the Secretary is authorized and directed to adopt appropriate measures to insure the preservation and propagation of fish and wildlife including certain minimum flows in the Trinity River. In this connection, the water rights permits issued to the Bureau of Reclamation and an agreement with the State of California provide for release of approximately 120,000 acre-feet of water per year from the reservoir into the Trinity River. This agreement satisfies the above-referenced provision in the Act and is a valid obligation with respect to the operation of the Trinity River Division.

In addition to the above-cited legislation relating to the CVP, Congress has, by separate legislation, authorized three units to be added to the

CVP since 1960. These are the San Luis Unit, P.L. 86-488, dated June 3, 1960 (74 Stat. 156); the Auburn-Folsom South Unit, P.L. 89-161, dated September 2, 1965 (79 Stat. 615); and the San Felipe Division, P.L. 90-72, dated August 27, 1967 (81 Stat. 173). None of these Acts reauthorized the CVP. The Act authorizing the San Luis Unit authorized the Secretary to "construct, operate and maintain the San Luis unit as an integral part of the Central Valley project." The Auburn-Folsom South Unit Act stated that the Secretary "is authorized to construct, operate, and maintain, as an addition to, and an integral part of, the Central Valley project, California, the Auburn-Folsom South unit, American River division." It further stated that the "operation of the Auburn-Folsom South unit, American River division, shall be integrated and coordinated, from both a financial and an operational standpoint with the operation of other features of the Central Valley project, as presently authorized, and as may in the future be authorized by Act of Congress. . . ." (emphasis added).

The legislation authorizing the San Felipe division, CVP, states as follows:

> "For the purposes of providing irrigation and municipal and industrial water supplies, conserving and developing fish and wildlife resources, enhancing outdoor recreation opportunities and other related purposes, the Secretary of the Interior acting pursuant to the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), is authorized to construct, operate, and maintain, as an addition to, and an integral part of, the Central Valley project, California, the San Felipe division."

As can be seen, the Act did not reauthorize the entire CVP. It did authorize the Secretary to construct, operate and maintain the San Felipe division as an addition to and an integral part of the CVP for the purposes stated. In order to determine the scope and extent of the purposes as set forth in the legislation, we must resort to the legislative history of the Act. A careful reading of the entire Act as well as the legislative history requires the conclusion that, insofar as those purposes defined as "conserving and developing fish and wildlife resources" and "enhancing outdoor recreation opportunities" are concerned, Congress intended them to be limited in scope and relate only to water delivered through the facilities authorized by the Act.

Section 2 of the Act reads as follows:

> "The conservation and development of the fish and wildlife resources and the enhancement of recreation opportunities

> in connection with the San Felipe division shall be in accordance with the provisions of the Federal Water Project Recreation Act (79 Stat. 213)."

Section 2 was inserted in the House Bill on the San Felipe division by the Committee on Interior and Insular Affairs by amendment. The legislative history of the amendments made by this committee are found in House Report No. 523. This report contains the following language with respect to the fish and wildlife and recreation purposes as outlined in Section 2:

> "The water delivered through the San Felipe facilities would enhance present fishery and recreation values, and local officials have already expressed their intent to enter into an agreement whereby the local agencies would administer the land and water areas for recreation and fish and wildlife enhancement and share the cost thereof pursuant to the Federal Water Project Recreation Act."

The letter from the Secretary of the Interior, to the Chairman, Committee on Interior and Insular Affairs, dated May 8, 1967, also found in H.R. 523 reference was made to conservation of fish and wildlife and enhancement of recreational opportunities in accordance with the provisions of the Federal Water Project Recreation Act. It states as follows:

> "The benefits to fish and wildlife enhancement will accrue from improved water supply in existing reservoirs, and no specific facilities or separable costs are involved. The only specific costs for recreation involve acquisition of lands and construction of facilites at Hudner Reservoir. As required by the Federal Water Project Recreation Act (Public Law 89-72) the San Benito County Board of Supervisors has indicated its intent in writing to agree to administer the land and water areas for those purposes and to assume the repayment of the non-Federal portion of these costs, now estimated at $150,000.

The Senate Report No. 282 which accompanies S.1111, which was enacted into P.L. 90-72, contains much the same language with respect to the construction of Section 2 and the purposes of the legislation. Further, House Document 500 on the San Felipe division is replete with language establishing that the fish and wildlife and recreation purposes referred to in the Act relate only to development and enhancement within the San Felipe service area resulting from the delivery of project water.

CONCLUSION

Accordingly, you are advised that it is our opinion:

1. That Congress has, in certain instances, enacted specific legislation relating to the use of water for fish and wildlife purposes from the CVP or from units thereof for limited purposes;

2. That operation of the CVP and utilization of water developed thereby is strictly limited to Congressionally authorized purposes;

3. That, without further Congressional legislation, the Bureau of Reclamation may utilize CVP water for fish and wildlife purposes only in those instances where such use has been authorized by Congress (cited above) and where such use would not otherwise infringe upon presently authorized functions.

Charles R. Renda
Regional Solicitor
Sacramento Region

November 15, 1954

Memorandum

To: Assistant Secretary Aandahl

From: Acting Solicitor

Subject: Allocations for fish and wildlife conservation on Central Valley Project

Your memorandum of October 4 inquired as to what authority there may be to make nonreimbursable allocations for fish and wildlife conservation on various units of the Central Valley Project. You point out that the Act of March 10, 1934 (48 Stat. 401), as amended by the Act of August 14, 1946 (60 Stat. 1080), and frequently referred to as the "Coordination Act," provided, with respect to projects authorized thereafter, that the Secretary should "make findings on the part of the estimated cost of the project which can properly be allocated to the preservation and propagation of fish and wildlife." Costs allocated pursuant to such findings are not reimbursable.

The Central Valley Project was authorized as a program to be carried out by the Department of the Interior by the provisions of section 2 of the Rivers and Harbors Act of August 26, 1937, (50 Stat. 844, 850). Appropriationwise, it had been initiated previously as a Federal project under the provisions of the Emergency Relief Appropriation Act of 1935 (49 Stat. 115), and the First Deficiency Appropriation Act, fiscal year 1936 (49 Stat. 1622). A financial contribution by the United States toward the cost of construction of Kennett (now Shasta) Dam as a part of the State of California Central Valley plan had been authorized by the provisions of section 1 of the Act of August 30, 1935 (49 Stat. 1028, 1038). As reauthorized as a completely Federal undertaking by the Act of August 26, 1937, it was declared to be for the purposes of improving navigation, regulating the flow of the San Joaquin River and the Sacramento River, controlling floods, providing for storage, and for the delivery of stored waters for the reclamation of arid and semiarid lands "and other beneficial uses" and for the generation and sale of electric energy. In 1940 (54 Stat. 1198, 1199), the reauthorization of 1937 was amended to provide for "* * * construction under the provisions of the Federal reclamation laws of such distribution systems as the Secretary of the Interior deems necessary in connection with lands for which said stored waters are to be delivered * * *."

The American River Basin Development Act of October 14, 1949 (63 Stat. 852), contains the first reauthorization following amendment of the Coordination Act of 1946. The next reauthorization, that of September 26, 1950 (64 Stat. 1036), had as its general purposes authorization of the Sacramento irrigation canals as part of the Central Valley Project. The act repeats, in exactly the same language, the reauthorization of the Central Valley Project as contained in section 2 of the Act of August 26, 1937, as amended by the Act of October 17, 1940.

In an opinion dated January 4, 1950 (M-36021), the then Solicitor advised the Commissioner of Reclamation that those provisions of section 2 of the Coordination Act relating to the transfer of funds to finance wildlife investigations were applicable at least to diversion works of the Central Valley Project, the construction of which had not been begun prior to August 14, 1946. Following the same reasoning, it would be necessary to hold that the authorization to allocate costs to the preservation and propagation of fish and wildlife also is applicable to facilities, the construction of which had not been begun prior to August 14, 1946. That same opinion also discussed the possibility of a holding, but made no final determination with respect to such holding, that the procedures prescribed in the Act of August 14, 1946, might apply to all projects as to which the actual impounding, diverting, or controlling of water took place after August 14, 1946, including those which had been authorized and on which construction had been begun prior to that date. At this point in the history of the Central Valley Project, it would seem reasonable to conclude that the provisions of the Coordination Act were fully applicable at least to those features of the Central Valley Project which had not been begun before August 14, 1946.

Public Law 674, 83d Cong., 2d Sess., again provided that the entire Central Valley Project, as previously authorized and reauthorized under the Acts of August 26, 1937, October 17, 1940, October 14, 1949, and September 26, 1950, " * * * is hereby reauthorized and declared to be for the purposes set forth in said Acts, and also for the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable under said Acts." (Emphasis supplied.) During the period from August 14, 1946, to the enactment of Public Law 674, authority to make nonreimbursable allocations for fish and wildlife conservation has been rather broad, as pointed out above. The enactment of Public Law 674 with its specific reference to one of the purposes of the project as being the use of waters for fish and wildlife raises another question that also must be answered, namely, does that act limit wildlife allocations to the use of waters for wildlife purposes. Such a construction seems unnecessarily restrictive, particularly since the term "other beneficial uses" as a purpose of the project has been included in all of the reauthorizations beginning with 1937, except that of October 14, 1949, and is incorporated by reference in Public Law 674 by use of the phrase "for the purposes set forth in said Acts." It is more reasonable to assume that reference to the use of waters for fish and wildlife purposes is simply a more definitive specification of "other beneficial uses" insofar as they may relate to wildlife conservation. The condition in Public Law 674 that the use of waters for wildlife conservation purposes shall be subject to such priorities as are applicable under prior authorizations also is simply a specific recognition by the Congress of the existence of the priorities originally specified in the 1937 act.

I am not disposed to regard the successive reauthorizations of the project as permitting one to regard all features of the project as open to the application of section 2 of the Coordination Act without regard to the time of actual initiation of construction. It is clear from an examination of these acts and their legislative histories that their intendment was, as particular drafting techniques, to add certain developments, features, or purposes to the then existing project but not, in effect, to post-date the authorizations to construct theretofore conferred.

In summary, and in answer to your questions, the terms of the Coordination Act authorizing allocations for wildlife conservation are applicable to those portions of the Central Valley Project, the construction of which was begun after August 14, 1946.

(sgd) J. Reuel Armstrong
Acting Solicitor

[Memorandum]

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SOLICITOR,
Washington, DC, November 18, 1985.

To: Secretary
From: Principal Deputy Solicitor
Subject: Analysis of Grasslands Legal Issues

The "Grasslands" is a natural wetlands area of approximately 100,000 acres along the San Joaquin River in the Central Valley of California. The area consists of several water districts, private lands, and State and federal wildlife refuges. In May 1985, the Regional Director of the Fish and Wildlife Service (Service) and the State Director of the California Department of Fish and Game announced that agricultural drain water (on which much of the area depends to maintain its wetlands character) would no longer be accepted because high levels of selenium had been found in the drain water. Both agencies requested the Bureau of Reclamation (Bureau) to provide approximately 200,000 acre-feet of fresh water from the Bureau's Central Valley Project (CVP), free of charge, to replace the drain water.

In responding to the request for CVP water for the Grasslands, the Solicitor was asked to review the Secretary's legal responsibilities to the Grasslands under various statutes administered by the Service and the Bureau. On October 1, 1985, this Office provided summary conclusions to the Assistant Secretaries for Fish and Wildlife and Parks, and for Water and Science regarding the Department's responsibilities and authorities respecting the Grasslands area. This memorandum discusses in detail the conclusions set forth in the summary opinion of October 1, 1985.

Question 1. What are the legal obligations, if any, of the Department to maintain areas as wetlands within Grasslands?

a. On a short term basis

Answer. Treaties. The migratory bird treaties that the United States has entered into with Japan and the Union of Soviet Socialist Republics each contains provisions committing the parties to protect the habitats of migratory birds. Convention on Migratory Birds, Mar. 4, 1972, United States-Japan, 25 U.S.T. 3329, T.I.A.S. No. 7990; Convention on Migratory Birds, Nov. 19, 1976, United States-U.S.S.R., 29 U.S.T. 4647, T.I.A.S. No. 9073. The Soviet Treaty, in particular, requires the parties to prevent and abate pollution or detrimental alteration of migratory bird habitat, art. IV(i). These treaties are not, however, self-executing; their implementing legislation, the Migratory Bird Treaty Act, 16 U.S.C. §§ 703 et. seq. (1982), is the source of legal authority to implement the various international bilateral commitments under the treaties, including the commitments to protect habitat. Thus, even if the treaties could be construed as obligating the United States to maintain wetlands in Grasslands as migratory bird habitat, the treaties themselves do not empower third parties to enforce such an obligation in court. If a bilateral migratory bird habitat treaty commitment were not adhered to, the consequences, if any, would result from action in the diplomatic arena.

Migratory Bird Treaty Act (MBTA), 16 U.S.C. §§ 703 et. seq. (1982). In implementing the various migratory bird treaties, Congress has provided no express authorization to the Department to fulfill the habitat protection provisions of the Japanese and Soviet Treaties. The MBTA instead focuses narrowly on regulation of the taking and commercialization of migratory birds. 16 U.S.C. §§ 703, 704 (1982). Actions that render an area less productive and valuable as migratory bird habitat do not violate the taking prohibitions of the MBTA. The MBTA therefore does not require that any area within the Grasslands be maintained as wetlands.

Section 3(h)(3) of the Fish and Wildlife Improvement Act of 1978, 16 U.S.C. § 712(2) (1982). This provision authorizes the Secretary to issue regulations as may be necessary to implement the provisions of the various migratory bird treaties. This brief and undefined grant of rulemaking authority could not serve as the basis for Departmental regulations implementing the habitat protection provisions of the Japanese and Soviet migratory bird treaties. It does not provide the Department with sufficient guidance to implement such a regulatory program even if it chose to do so, since Congress has addressed neither the process of designating protected habitat areas nor the scope and degree of protection to be afforded such areas. Until Congress addresses these issues, the Department has no enforceable legal obligation and no guidance under Section 3(h)(3) of the Fish and Wildlife Improvement Act to establish a regulatory program to maintain wetlands in the Grasslands.

National Wildlife Refuge System Administration Act of 1966 (NWRSAA), 16 U.S.C. §§ 668dd et seq. (1982). The San Luis National Wildlife Refuge (which the

United States owns in fee) (San Luis NWR) is subject to the provisions of the NWRSAA since it is administered by the Secretary as a wildlife refuge. 16 U.S.C. § 668dd(a)(1) (1982). Similarly, the wetland easements obtained by the Service in the Grasslands area (which constitute the Grasslands Wildlife Management Area and are managed as part of the San Luis NWR complex) are subject to those requirements of the NWRSAA that are applicable to easement interests. Id. Section 4(a)(1) of the NWRSAA, 16 U.S.C. § 668dd(a)(1) (1982), states that the general purpose of that Act is to provide for the consolidation of the Secretary's authority to develop and administer land based conservation programs for fish and wildlife resources. Apart from this general statement regarding the Secretary's responsibility to promote fish and wildlife conservation on areas of the National Wildlife Refuge System (NWRS), there is no additional express statement of management goals for the System in the Act. Congress has, however, provided indirect guidance on this matter through Section 4(d), 16 U.S.C. § 668dd(d) (1982), of the NWRSAA. That Section regulates the use of Refuge System lands by the public, and provides that such uses are to be permitted only upon a determination by the Secretary that the uses are compatible with the purposes for which the particular refuge unit was established. If one assumes that congressional management standards for controlling public use of a refuge provide a relevant, albeit implicit and indirect, standard for guiding the development of the Department's own management operations for said refuge, then it could be argued that Section 4(d) of the NWRSAA indicates that the Service's management of a unit of the NWRS be compatible with the purposes for which it was acquired. The purposes for which the Grasslands units of the NWRS referred to above were established are the protection and perpetuation of the migratory bird resources that inhabit and utilize the area.[1]

Given this implicit management standard, the Secretary would have the authority to cut off water on a short-term basis to those Grasslands units of the System (as to which he has the power to do so) as long as the cut-off serves the purposes of protecting migratory birds from continued exposure to selenium poisoning. Where such a biological justification exists for not maintaining the area as a wetland, as intended when it was acquired, the Secretary should have the discretionary authority under the NWRSAA to not maintain those wetlands over the short term.

Endangered Species Act (ESA), 16 U.S.C. §§ 1531 et seq. (1982). Two species listed as endangered pursuant to the ESA, the Aleutian Canada Goose and the San Joaquin Kit Fox, inhabit the Grasslands. Maintenance of the wetlands is not important to the San Joaquin Kit Fox, which is an upland species. The Aleutian Canada Goose, however, is a migratory waterfowl, the entire population of which (about 4,000 birds) inhabits wetlands in the Grasslands during the winter months. While it principally inhabits wetland areas in East Grasslands, it also makes significant use of the lands of two private duck clubs in West Grasslands, the Salinas Club, a non-easement club, and the Britto Club, from which the Service has obtained a wetlands easement. Of the two West Grasslands clubs, the Salinas Club sees the greatest numbers of Geese on particular days, while the Geese make the most consistent day to day use of the Britto Club.[2] The Geese make relatively little use of the San Luis NWR.

Section 7(a)(2) of the ESA, 16 U.S.C. § 1536(a)(2) (1982), requires federal agencies, such as the Fish and Wildlife Service, to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species." A problem under Section 7(a)(2) could only arise if the Britto Club decided to no longer maintain the wetlands. The Secretary would then be faced with a decision as to whether to exercise his flooding rights under the easement agreement with the Britto Club to maintain the wetlands.

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[1] These areas were acquired under authority of the Migratory Bird Conservation Act "for use as an inviolate sanctuary, or [for those acquisitions after 1978] for any other management purpose, for migratory birds". 6 U.S.C. § 715d (1982).

Areas acquired under this authority must be "necessary for the conservation of migratory birds." 16 U.S.C. § 715c (1982), and are to be "administered by the Secretary of the Interior under rules and regulations prescribed by him to conserve and protect migratory birds in accordance with treaty obligations with Mexico, Canada, Japan, and the Union of Soviet Socialist Republics, and other species of wildlife found thereon, including species that are listed pursuant to section 1533 of this title as endangered species or threatened species, and to restore or develop adequate wildlife habitat." 16 U.S.C. § 715i(a) (1982).

[2] Because of the lack of & federal property interest at the Salinas Club, no legal obligation exists under the ESA that would bind the Department to maintain the non-easement wetlands at the Club. Any decision to not maintain that club as a wetland would be purely private in nature, and would not trigger any Departmental responsibilities under section 7 of the ESA, 16 U.S.C. § 1536 (1982). For purposes of this discussion we will therefore focus solely on the Britto Club, which is covered by a federal wetland easement agreement.

For reasons that follow, Section 7(a)(2) would not apply to such a Secretarial decision, because it would be a decision on whether to act, as opposed to a decision to undertake a particular action. The plain language of section 7(a)(2) requiring that each federal agency "insure that any action authorized, funded, or carried out" by the agency avoid jeopardy to a listed species, indicates that some affirmative act by the agency is necessary to trigger Section 7(a)(2). The extensive discussions of Section 7 in the committee reports on the ESA and its several amendments do not deal directly with this issue. At this time there is no reported court decision addressing the issue of whether agency inaction can be subject to the requirements of Section 7(a)(2).

Analogies drawn from case law developed under the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321 et seq., (1982) lend support, though, to the argument that the Secretary's decision on whether to exercise his Britto Club wetlands easement rights would not be subject to Section 7(a)(2). In *Defenders of Wildlife* v. *Andrus*, 627 F.2d 1238 (D.C. Cir. 1980), the court considered the Secretary's obligation, if any, to prepare an environmental impact statement (EIS) with respect to a wolf-hunting program conducted by the State of Alaska on certain federal lands within the State. At issue was whether the Secretary had the authority under the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. §§ 1701 et seq. (1982), to prevent a State hunting program on public lands and, if so, whether he was first obliged to prepare an EIS prior to acquiescing in the program. The court assumed for purposes of analysis (but did not decide) that FLPMA gave him such power and then ruled that "if the agency decides not to act, . . . the agency never reaches a point at which it need prepare an [EIS]." Id. at 1244. Citing *Kleppe* v. *Sierra Club*, 427 U.S. 390 (1976), and *Aberdeen and Rockfish Railroad* v. *SCRAP (SCRAP II)*, 422 U.S. 289 (1975), the court stated "that Congress did not expect agencies to prepare [EIS's] if there is to be no action." 627 F.2d at 1244. This line of NEPA case law therefore provides further support for our conclusion that in the context of Section 7(a)(2), a decision not to act is not subject to the provisions of that Section.[3]

Apart from Section 7(a)(2), a somewhat more difficult question is whether Section 7(a)(1) of the ESA, 16 U.S.C. § 1536(a)(1) (1982), could be construed to require the Secretary to maintain the easement wetlands at the Britto Club should the Club no longer do so. Section 7(a)(1) requires federal agencies to "utilize their authorities in furtherance of the purposes of the [ESA] by carrying out programs for the conservation of endangered and threatened species." Section 3(3) of the ESA, 16 U.S.C. § 1532(3), defines "conservation" as "the use of all methods and procedures which are necessary to bring any endangered species . . . to the point at which the measures provided [by the ESA] are no longer necessary." Some courts have construed this provision as imposing on federal agencies an affirmative duty to "use all methods necessary" to improve the conditions of listed species so that they are no longer endangered or threatened. *Defenders of Wildlife* v. *Andrus*, 428 F. Supp. 167, 170 (D.D.C. 1977). The Ninth Circuit, which covers California, considers Section 7(a)(1) to mandate the use of the programs and authorities of an agency to further the conservation of listed species. *Carson-Truckee Water Conservancy District* v. *Clark*, 741 F.2d 251, 261 (9th Cir. 1984). See also *National Wildlife Federation* v. *Hodel*, No. S-85-0837 EJG, slip op. at 9-11 (E.D. Cal. Aug. 26, 1985).

The Ninth Circuit's handling of Section 7(a)(1) in the *Carson-Truckee* case must be viewed, however, in light of the issues on which the court did not rule. Unlike the district court, the court explicitly found that it did not have to rule on whether Section 7(a)(1) places endangered species conservation above other, competing statutory demands. 741 F.2d at 262 n.5. More importantly, the existence of an active agency species conservation program convinced the Ninth Circuit that it "need not consider the extent of the [Secretary's] affirmative obligations under ESA . . . § 7(a)(1) had he decided . . . [not to act] to protect the [endangered species]." Id. That is, the

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[3] Even if Section 7(a)(2) were to apply as a matter of law, the facts of this particular situation indicate that no violation of the "jeopardy" standard would occur. Available information indicates that failure to maintain the Britto Club wetlands would not jeopardize the continued existence of the Geese over the short term. The Portland Regional Office of the Service has advised that the Britto Club wetlands are not so heavily used by the Geese that their temporary loss would seriously affect the species, particularly because most of the Geese's wintering habitat is in the East Grasslands. Moreover, if the decision to not maintain the Britto Gun Club wetlands were premised upon a desire to shield migratory birds like the Geese from further exposure to selenium, then "jeopardy" would be even more difficult to find.

Ninth Circuit declined to second guess the Secretary and rule on the adequacy of the conservation program being implemented.

Given the above case law, it is unlikely that a court would interpret Section 7(a)(1) as requiring the Secretary to maintain the Britto easement area as a wetland in the short run. As noted earlier, the Britto area is not of significant importance to the Aleutian Canada Goose. Moreover, while Section 7(a)(1) authorizes and directs federal agencies to utilize their authorities for endangered species conservation purposes, we note elsewhere in this memorandum that there are significant restrictions and limitations on the Secretary's ability to deliver clean Class I irrigation water to the easement areas. Thus, while the flooding language in the underlying easement agreements is very broad, water quality is presently as important as water quantity in the Grasslands area. Unless the Secretary could flood the easement area with clean water, as opposed to agricultural drainage water, the conservation of the Aleutian Canada Goose would not be served. As is discussed later in this memorandum, this Department is doing all that it can, given the statutory limitations currently imposed upon the Secretary, to provide additional clean water to the affected Grasslands areas, including its easement areas. Under these circumstances, there would be no legitimate basis under Section 7(a)(1) for a court to "second guess" a Secretarial decision to temporarily acquiesce in the cessation of pumping at the Britto Clubs.

In summary, only a remote chance exists that maintenance of the Britto Club wetlands which are subject to a wetlands easement agreement, is significant for the survival of the endangered Aleutian Canada Goose. Should events occur, however, which subsequently make these wetlands necessary for the conservation of the Goose, the Secretary would have to review closely his duties and authorities under Section 7(a)(1) of the ESA in order to determine his appropriate course of action. As for Section 7(a)(2), as a matter of law, it would not apply to a Secretarial decision to not exercise the easement agreement's flooding rights since Section 7(a)(2) applies only to the affirmative actions of federal agencies.

1954 CVP Reauthorization Act, as amended (1954 CVP Act) 16 U.S.C. §§ 695d-695j (1982). The 1954 CVP Act created no legal obligation to maintain the federal refuges as wetlands. Section 1 of the 1954 CVP Act, 16 U.S.C. § 659d (1982), reauthorized the entire CVP and declared it to be for the purposes set forth in its prior authorizing Acts "and also for the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable under said Acts." As is discussed more fully in the answer to Question VI., infra, the Secretary has discretionary authority under Section 2 of the 1954 CVP Act to supply approximately 47,000 acre-feet annually of CVP water to refuges and wildlife management areas owned and operated by the United States or the State of California. Given the discretionary nature of this authority, it does not obligate the Secretary to provide even this quantity of water to maintain the refuges within the Grasslands area as wetlands. In addition, Section 6 (as amended by Section 10(a) of the 1978 Fish and Wildlife Improvement Act, Pub. L. No. 95-616, 16 U.S.C. § 695i (1982)) of the 1954 CVP Act, also discussed infra, authorizes the Secretary to contract for the delivery of 50,000 acre-feet of CVP water to public organizations or agencies for use on private lands within the Grasslands area. That water is to be provided on a nonreimbursable basis, in return for which the public organizations or agencies must, among other things, deliver at no cost to the Service certain minimum quantities of water annually. The Secretary has executed a contract for this water with the Grassland Water District (GWD). Apart from the delivery of water required by the terms of the contract, this Section 6 authority does not obligate the Secretary to maintain wetlands on any lands within the Grasslands area.

Fish and Wildlife Coordination Act, (FWCA) 16 U.S.C. §§ 661-666c (1982). The FWCA authorizes federal water project agencies to "modify or add to the structures and operations of such projects, the construction of which has not been substantially completed on the date of enactment of [the Act] and to acquire lands . . . in order to accommodate the means and measures for such conservation of wildlife resources as an integral part of the projects." 16 U.S.C. § 662(c) (1982). In addition, the FWCA provides that whenever the waters of any stream or other body of water are controlled or modified for any purpose, adequate provision is to be made for the use of those waters (together with any areas of land or interests therein acquired) for fish and wildlife purposes consistent with the primary purpose of the control. 16 U.S.C. § 663(a) (1982). The use of those waters for wildlife conservation is to be in accordance with general plans approved jointly by the Secretary of the Interior, the head of the agency exercising primary jurisdiction over the project and the head of the state fish and game agency, and those waters and other interests shall be made available, without cost, for administration by the Secretary of the Interior where they have value for the migratory bird program, and to the state where they are valuable for other than migratory bird purposes. 16 U.S.C. § 663(b) (1982).

At this time there are no general plans approved jointly by the above parties other than the 1950 recommendations approved by the Secretary of the Interior, the Commissioner, Bureau of Reclamation, the Director, Fish and Wildlife Service,, and the California State Department of Natural Resources, Division of Fish and Game. Those recommendations do not, however, constitute a Coordination Act plan.

Thus, the FWCA by itself would not obligate the Department to maintain any, of the lands involved as wetlands.

Migratory Bird Conservation Act (MBCA), 16 U.S.C. §§ 715 et seq. (1982). This statute authorizes the Secretary to acquire areas that he determines to be suitable for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. 16 U.S.C. § 715d (1982). The San Luis NWR and the federally owned wetland easements were acquired under authority of the MBCA. If these areas lose their character as migratory bird habitat on a short term basis, they likely will not become unsuitable for use as inviolate sanctuaries, or for any other management purposes, for migratory birds, particularly if the loss of wetland character minimizes potential adverse impacts on migratory birds.

The MBCA directs the Secretary to administer areas acquired under its authority, pursuant to rules and regulations prescribed by him, to conserve and protect migratory birds in accordance with treaty obligations under the various migratory bird treaties. 16 U.S.C. § 715i(a) (1982). The rules and regulations prescribed by the Secretary to conserve and protect migratory birds in accordance with the United States' treaty obligations, 50 C.F.R. Parts 20 and 21 (1984), do not obligate the Department to maintain the refuges as wetlands.

Executive Order 12990, 42 Fed. Reg. 26,961 (1977)—Protection of Wetlands. Section 1(a) of the order requires federal agencies to minimize the destruction, loss or degradation of wetlands in carrying out their responsibilities to, among other things, manage federal lands and facilities and conduct activities and programs affecting land use, including water and related land resources activities. These requirements apply to the activities of the Bureau and the Service in the Grasslands area. They do not, however, require the Department to maintain wetlands in the Grasslands over the short term. First, Section 1 does not impose an absolute requirement that wetlands be maintained; instead it requires agencies to "minimize" loss of wetlands. In addition, any action that the Department might take (or avoid taking) in the direction of wetlands elimination over the short term presumably would result from a desire to protect fish and wildlife resources from the harmful effects of selenium-laden wetlands. Section 5 of the Executive Order requires an agency to implement its Section 1 responsibilities by considering such factors as water quality, pollution, and conservation of fish and wildlife and their habitats. To the extent, then, that wetlands are eliminated over the short term in order to protect fish and wildlife, such actions are clearly allowed for in the Executive Order.

Executive Order 11990 is not judicially enforceable. Executive orders have the force and effect of law only when they are issued pursuant to a statutory mandate or delegation of authority from Congress and when they also create a private cause of action. *Independent Meat Packers Ass'n* v. *Butz,* 526 F.2d 228, 234-236 (8th Cir. 1975); *National Indian Youth Council* v. *Andrus,* 501 F. Supp. 649, 678 (D.N.M. 1980). Executive Order 11990 cites as authority "the Constitution and statutes of the United States of America [and] the National Environmental Policy Act of 1969." A simple reference to the Constitution and statutes of the United States is not sufficient, *Independent Meat Packers,* 526 F.2d at 235; to be judicially-enforceable an Executive order must be based on specific statutory authority. Neither is a bare reference to NEPA enough, because that statute contains no directive to the President to issue Executive orders having the force and effect of law. *National Indian Youth Council,* 501 F. Supp. at 679. Moreover, even if there were a specific statutory basis for Executive Order 11990, the Order does not expressly grant a private right of action to enforce the terms of the Order, thereby confirming that it is not judicially enforceable. *Acevedo* v. *Nassau County,* 500 F.2d 1078, 1083-1084 (2d Cir. 1974). Executive Order 11990 is a "managerial tool" for the use of the Executive branch.

Contract. There is no specific contract applicable to the San Luis NWR. The contracts among Bureau of Reclamation, Fish and Wildlife Service, the Grassland Water District, and other irrigation districts do not require maintenance of wetlands and are discussed more fully in the answer to Question VI., below.

The grant of easement contracts, by which the United States acquired various wetland easements on private lands, are not relevant to the federal or State wildlife refuges.

The easement contracts apply only to the extent that the United States has purchased easements on particular lands, and would not impose any obligation on the Department to maintain these areas as wetlands. The contract between the United States and the landowner by which the easement was obtained provides that the grantee United States (Service) "shall [h]ave a perpetual non-exclusive right to flow waters upon the described lands from September 1 through February 1 of each year, at the sole option of the Grantee." It does not require the grantee to do so, however, and expressly leaves that decision up to the discretion of the grantee.

b. On a long term basis

With the possible exception of the NWRSAA, the answers to Question 1a. do not change if the Department's legal obligations are examined over the long term instead of the short term.

As discussed above, the NWRSAA provides a broad grant of authority to the Secretary to maintain Refuge System lands and interests therein for the purposes for which those units of the System were acquired. While this authority would allow the Secretary to eliminate temporarily a unit's utility as a migratory waterfowl habitat in the interest of protecting the birds from, for example, toxic substances, it provides little guidance for a situation in which toxicity precludes management for waterfowl habitat. While in one sense it could be argued that an administrative decision to eliminate a unit's utility as waterfowl habitat over the long term because of such toxicity would constitute management in derogation of the purposes for which the unit was acquired, to continue to maintain the area as toxic waterfowl habitat equally is management in derogation of the purposes for which the land was acquired. However, since the surrounding circumstances of such a long term decision and the nature of the options then available to the Secretary would be crucial to assessing its propriety under the NWRSAA, see generally 16 U.S.C. §§ 668dd(a)(1), (d), nothing more conclusive can be stated at this point than to suggest that the Secretary's responsibilities under that Act be revisited and reviewed at the time that such a long term decision need be made.

The Secretary's options are clearer where the factors adversely affecting a refuge are totally beyond his control. Where circumstances beyond the Secretary's control and discretion prevent management of a Refuge System unit in a manner compatible with the purposes for which the unit was established, the unit's value as a part of the Refuge System would clearly be diminished, if not eliminated entirely. In that case, the Secretary would have several options:

(1) If the unit consists of acquired lands, the Secretary could determine, with the approval of the Migratory Bird Conservation Commission, that the lands are no longer needed for the purposes for which the Refuge System was established, in which case the lands could be transferred or disposed of for an amount not less than their acquisition cost or fair market value, whichever is greater. Proceeds from such disposition would be paid into the Migratory Bird Conservation Fund. 16 U.S.C. § 668dd(a)(2) (1982).

(2) The Secretary could advise Congress of the changed circumstances precluding his effective management of the lands, whereupon Congress could take legislative action to remove the lands from the Refuge System. 16 U.S.C. § 668dd(a)(3) (1982).

(3) The Secretary could exchange the lands for other more suitable lands. The values of the lands exchanged must be equal, or the difference made up by payment of cash. 16 U.S.C. § 668dd(b)(3) (1982).

(4) If the lands became part of the Refuge System by cooperative agreement with another federal or state entity, they could be removed pursuant to the termination provisions of such an agreement. 16 U.S.C. § 668dd(a)(3)(iii) (1982).

Action under one of the above scenarios could be necessitated if, for example, the water supply of a particular Refuge System unit became polluted due to natural environmental factors beyond the control of the Secretary, thus causing the area to lose its character as migratory bird habitat and become unsuitable for use as an inviolate sanctuary, or for any other purpose, for migratory birds. In that instance, if the problem could not be resolved in the short term, the Secretary would have to review the remedial actions outlined above under the NWRSAA. As long as the Service's refuge and easement areas in Grasslands remain part of the Refuge System, the Secretary must be mindful of his responsibilities under the NWRSAA. The Secretary will be relieved of that obligation only if the areas are removed from the Refuge System by one of the above methods.

Question 2. Wat are the rights and obligations of the Fish and Wildlife Service respecting use of drainage water?

a. Respecting diversions from Salt Slough

Answer. The Service appropriates water from Salt Slough pursuant to two licenses granted by the State Water Resources Control Board (SWRCB). Together, these licenses allow a maximum withdrawal of 19,910 acre-feet per year for the following beneficial uses:

> Irrigation of 1,622.7 acres within a portion of Rancho San Jon De Santa Rita lying between Salt Slough and the San Joaquin River, being within projected portions of T. 8 S., R. 10 E; and T. 8 S., R. 11 E, MDB&M, as shown on the map filed with State Water Resources Control Board.

License No. 10120, dated May 15, 1973 (maximum diversion per year: 6,060 acre-feet).

> Stockwatering, fish culture, recreational and wildlife propagation uses within a 5,137.7 acre portion of the San Luis National Wildlife Refuge, within portions of Rancho San Jon De Santa Rita lying between Salt Slough and San Joaquin River, being within projected portions of T. 8 S., R. 10 E; T. 8 S., R. 10 E.; T. 8 S., R. 11 E.; and T. 9 S., R. 11 E., MDB&M, as shown on the map filed with the State Water Resources Control Board, and irrigation of a net of 2,041 acres within a gross area of 5,137.7 acres within the San Luis National Wildlife Refuge described above.

License No. 10714, dated January 12, 1977 (maximum diversion per year: 13,850 acre-feet).

There is no provision in either of these licenses that requires the Secretary to exercise his rights under them and actually to divert water; whether he does so is discretionary. In this connection, however, it should be noted that California law provides for revocation of a license if "the licensee has ceased to put the water to . . . useful or beneficial use. . . ." Cal. Water Code § 1675 (West 1971).

b. Respecting the provision of drainage for the Grassland Water District

The contractual arrangements between the United States and the Grassland Water District (GWD) assign legal responsibility to the GWD for "the control, carriage, handling, use, disposal, or distribution of water" supplied by the United States. Contract No. 14-06-200-6106, art. 12 (dated September 13, 1956); Contract No. 14-06-200-3447A, art. 7 (dated August 4, 1967). Accordingly, the United States has no contractual obligation whatever to GWD respecting the provision of drainage.

There may be, however, easements or other encumbrances on various lands within GWD that obligate the landowners to allow drainage waters to flow across or through their lands. An example is provided in the context of the San Luis NWR. Title to the land comprising this refuge is encumbered by easements in favor of the San Luis Canal Company, allowing this company to flow drainage through three canals and a collection ditch which pass through refuge lands. While the Service is under no obligation to pump, or allow this water to be pumped, onto refuge lands, on occasion drainage water may be commingled in the canals with other, higher quality water that the Service desires to use on refuge lands. Thus, the San Luis Canal Company flowage easements have practical water quality implications for the service.

c. Respecting the receipt of water from Grassland Water District

1. Refuge Lands

Contract No. 14-06-200-4658A, dated December 6, 1980, is the amendatory Cooperative Agreement and Habitat Management Plan under which the United States delivers CVP water to GWD. It provides:

> (b) Article 5 of the original agreement is mended to read as follows:
>
> 5. Notwithstanding the prevailing rate and notice provisions in Article 7 of said contract No. 14-06-200-6106, Water and Power shall furnish to the District, subject to the limitations and provisions contained in said contract, not to exceed 50,000 acre-feet annually without charge to the District: Provided, That in order for the delivery of such water to continue on a nonreimbursable or nonreturnable basis:
>
> > (a) The District shall deliver without charge to the FWS not less than 3,500 acre-feet of water during the period October 1 through November 30, inclusive, and not less than 4,000 acre-feet of water during the period of May 1 through September 30, inclusive, if available: Provided, That such amounts of water and times of delivery may be changed upon approval of the Secretary of the Interior.

This provision of the Agreement is based on Section 6 of the Act of August 27, 1954, as amended by Section 10(a) of the Fish and Wildlife Improvement Act of 1978, Pub. L. No. 95-616, 92 Stat. 3115, 16 U.S.C. § 695i (1982). The requirement that

GWD deliver water to the Service is a condition of delivery of CVP water to GWD on a nonreimbursable or nonreturnable basis.

GWD does not receive any CVP water from November 16 through September 14 of each year. Thus, the deliveries of water to the Service required, if available, during the period May 1 through September 30 in accordance with the Agreement are predominantly, if not exclusively, composed of agricultural drain water. The amount and timing of the required deliveries, however, "may be changed upon approval of the Secretary of the Interior." 16 U.S.C. § 695i(a) (1982); Contract No. 14-06-200-4658A, art. 5, as amended. The Secretary is not expressly given unilateral authority in this regard, but taking into account that the requirement for water deliveries to the Service is most readily explained as consideration for the deliveries of CVP water to GWD on a nonreimbursable or nonreturnable basis, it can reasonably be asserted that the Secretary, acting through the Service, is empowered under the Act and Agreement to refuse the deliveries of water on any basis. It is more certain that the Secretary could refuse such deliveries on the ground that the water is unsuitable for waterfowl. Under either view, a refusal would not subject the Service to any liabilities to GWD or upstream draining entities.

2. Easement Lands

The Service has no contractual arrangement with the GWD expressly covering the delivery of water to easement land. Still, two provisions of the Agreement bear consideration in this regard.

Article 2, as amended, provides:

> 2. The District shall maintain water in quantities and under conditions best suited for wildlife use and maintenance of waterfowl habitat on 25% of the District area by utilizing summer drain waters from various sources during the period August 1 to September 15 each year, and during the period from the close of the hunting season to June 1 of each year to the extent that existing supplies and drain waters are available. In the event a dispute occurs between the District Management and the BSFW [Service] as to what constitutes 25% of the District Lands, the decision of the BSFW will be final.

This contract provision imposes an obligation on GWD, not the Service. Moreover, it appears to confer on the Service the authority to determine whether the application of certain drain water to lands within GWD is consonant with the requirement that water be maintained on GWD lands "under conditions best suited for wildlife use and maintenance of waterfowl habitat." Thus, arguably, the Service could act under the Agreement to relieve the GWD of the requirement to utilize summer drain waters to maintain waterfowl habitat on 25 percent of GWD lands.

Another relevant provision of the Agreement is article 5(d):

> (d) In accordance with existing or future agreements, the use of lands located within the boundaries of the District shall be restricted by covenants requiring that such lands be used only for the purpose of waterfowl and wildlife habitat conservation or other uses as may be mutually agreed upon by the District and FWS.

Arguably, the Department could assert a third party beneficiary interest under these restrictive covenants, and thereby act to preclude the application of drain water on GWD lands on the basis of unsuitable water quality. Of course, the necessary premise of successful action for this purpose would be adequate proof that the drain water is not of suitable quality to maintain waterfowl and wildlife habitat in accordance with the Agreement.

d. Respecting any continuing obligation to receive drain water

The Department has authority under its agreement with the GWD to refuse to accept deliveries of drain water on federal refuge lands and possibly to preclude application of drain water on lands within the GWD. Such preclusion would depend upon a determination that drain water is not suitable for use to maintain waterfowl and wildlife habitat in accordance with the purposes of the water service agreement with GWD. Reference to any relevant Clean Water Act requirements would be probative, but not necessarily determinative, of the unsuitability of drain water for use to maintain waterfowl and other wildlife habitat.

Compliance with all applicable federal and State pollution control laws is, however, a requirement for the GWD under Contract No. 14-06-200-4658A, art. 17, as amended. Accordingly, the Department can take appropriate action under this agreement, including terminating the supply of CVP water, or some lesser action, if noncompliance with federal or State water pollution control laws is established.

With respect to selenium, the Environmental Protection Agency (EPA) has established drinking water standards, 48 Fed. Reg. 45,514 (Oct. 3, 1983), and criteria for the protection of human health, 45 Fed. Reg. 79,318 (Nov. 28, 1980), at 10 ug/1, and criteria for protection of freshwater aquatic life, id., at 35 ug/1, 24-hour average; 260 ug/1, maximum. These standards and criteria do not, however, bear directly on determining the suitability of drain water for use in maintaining waterfowl and other wildlife habitat. Compare the findings of Dennis Lemly,[4] which indicate that selenium levels of 8 to 10 ppb (ug/1) were biologically magnified to a level that resulted in observable adverse effects on the reproductive capabilities of the species. Also, research done by the Service at the Patuxent Wildlife Research Center in Laurel, Maryland, found that in selenium-dosed feeding trials with mallards, the ducks showed impaired reproduction from 10-25 ppm in feed.

More to the point of the Department's authority under article 17 of the agreement is that the State Water Resources Control Board (SWRCB), which administers an approved program pursuant to Section 402 of the Clean Water Act (33 U.S.C. § 1342) (1982), has not yet set discharge requirements to meet the EPA, or more stringent, standards and criteria. Instead, the SWRCB has expressly allowed discharges of agricultural drain water into the Grasslands area and into the San Joaquin River and its tributaries to continue pending the collection of further water quality data through monitoring of these discharges. Order No. WQ 85-1, at 55-60 (February 5, 1985). Accordingly, the fact that concentrations of selenium may be found to exceed existing standards and criteria in waters of the United States or of the State within the Grasslands area does not demonstrate a violation of federal or State law. In short, then, at this point, the Department must rely on contract terms other than article 17, or on statutory authority other than the Clean Water Act, as a basis for refusing deliveries of drain water to refuges or precluding application of such waters on lands within the GWD.

If the drainage water contains concentrations of selenium which have been shown to harm or to constitute a threat of harm to resources which the Service has a statutory, treaty, or other legal responsibility to conserve and protect, then the Service would have a sufficient basis in such authority to refuse delivery of the drainage regardless of whether the selenium levels are within EPA or Clean Water Act standards.

The Service's statutory responsibilities to conserve and protect the resources of particular units of the National Wildlife Refuge System under the National Wildlife Refuge System Administration Act and its broader responsibilities to protect fish and migratory birds under the Migratory Bird Treaty Act and the Endangered Species Act, would allow, if not require, the Service to avoid use of drainage water which poses a threat to fish and wildlife. The levels of selenium which pose such a threat may or may not be equivalent to the EPA or Clean Water Act standards.

Question 3. What is the legal liability, if any, of the Department under the Endangered Species Act and the Migratory Bird Treaty Act resulting from the continued use of agricultural drain water?

Answer. For a detailed discussion of the Migratory Bird Treaty Act in the context of migratory bird deaths resulting from ingestion of selenium, see the May 31, 1985, memorandum from the Solicitor to the Secretary on the Kesterson Reservior, which discusses in detail the potential, if any, for application of the Migratory Bird Treaty Act to migratory bird deaths resulting from ingestion of selenium. Our conclusions on the MBTA are set forth fully in that memorandum.[5]

The endangered Aleutian Canada Goose inhabits wetlands within the Grasslands during the winter months. Most of these wetlands are located in East Grasslands, but the Geese also utilize two private duck clubs in West Grasslands. One, the Britto Club, contains easement wetlands, while the other, the Salinas Club, does not. The Geese make minor use of the San Luis NWR.

There are no known deaths of any such Geese caused by the application of drain water in Grasslands. However, if continuing application of agricultural drain water to any of the wetlands in West Grasslands were to result in deaths of the Geese, the landowners and/or Service officials could be subject to civil or even criminal liability under Section 9 of the ESA, 16 U.S.C. § 1538. Section 9 prohibits the taking of endangered species. "Take" is defined in Section 3(19) of the ESA, 16 U.S.C.

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[4] A. Dennis Lemly, Selenium in a Power Plant Cooling Reservoir: A Long Term Study of Accumulation and Biomagnification from Waterborne Concentrations in the Low Microgram per Liter Range, Department of Biology, Wake Forest University, Winston-Salem, North Carolina.

[5] Subsequent to the issuance of that opinion, the Department of Justice issued an opinion on October 7, 1985, in which it concluded that the MBTA's strict criminal liability provisions were not intended to apply to federal officials and employees who are engaged in congressionally authorized projects, provided that, (1) the official acts within the authority granted by Congress, and the employees perform their job responsibilities with due care; and (2) they make a good-faith attempt to comply, to the extent practicable under the circumstances, with the MBTA.

§ 1532(19) (1982), to include, among other things, "harm" to the species as well as the killing of the species. The Service in turn has defined "harm" in 50 C.F.R. § 17.3 (1984) to mean:

> an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation (that) actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

Thus, if increased selenium levels resulting from continued application of agricultural drain water to the winter habitat of the Geese were to result in death or injury to individual Aleutian Canada Geese, a violation of Section 9 of the ESA may occur. Such violations are subject to strict civil liability, 16 U.S.C. § 1540(a) (1982), while knowing violations are subject to criminal liability, 16 U.S.C. § 1540(b) (1982).[6]

Question 4. What are the legal obligations, if any, of the Department for remedial action in the Grasslands area?

Answer. It is highly unlikely that the current environmental conditions at Grasslands would impose obligations on the Department to undertake removal or remedial action. The relevant environmental statutes are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund), 42 U.S.C. 9601 et seq. (1982); the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 et seq. (1982); the Clean Water Act (CWA) 33 U.S.C. §§ 1251 et seq. (1982); and equivalent California State laws.

a. CERCLA or Superfund

CERCLA requires the cleanup of hazardous substance releases into the environment. 42 U.S. § 9604(a) (1982) Release is defined very broadly in CERCLA and includes pumping, pouring, discharging and leaching into the environment from ponds, lagoons, impoundments and ditches. 42 U.S.C. § 9601(22) (1982) Selenium is a listed hazardous substance under CERCLA. 50 Fed. Reg. 13,456 (April 4, 1985).

Section 103 of CERCLA, 42 U.S.C. § 9603 (1982), requires the reporting of a release of a hazardous substance equal to or greater than the reportable quantities established by EPA. The reportable quantity for selenium is one pound in a 24 hour period. See 50 Fed. Reg. 13,456 (April 4, 1985). The reportable quantity, however, is not intended to set the standard at which damage to the resource does or does not occur. It is merely, "a trigger for informing the government of a release so that appropriate federal personnel can evaluate the need for a federal response action." 50 Fed. Reg. 13,457 (April 4, 1985). The "release of a reportable quantity will not necessarily pose a hazard to public health or welfare or the environment . . . [E]ach release is assessed on a case-by-case basis." Id.

CERCLA imposed joint and several strict liability on four categories of parties for the costs of any removal or remedial actions and for natural resource damages. 42 U.S.C. § 107(a) (1982). *United States* v. *Conservation Chemical Co.*, 589. F. Supp. 59, 62 (W.D. Mo. 1984). The four categories are the present owners and or operators of a facility from which a release occurred; the past owners or operators of a facility (when the release occurred); the generators of the hazardous substance and the transporters of the hazardous substance.

CERCLA itself does not specifically exclude irrigation return flows from its definition of hazardous substances; however, the application of CERCLA to agricultural runoff situations is not typical and would raise substantial problems in the identification of responsible parties. In the Grasslands situation, for example, the Bureau provides the water but does not release any hazardous substance, while the individual farmers contribute small amounts of selenium but individually probably do not release a hazardous substance into the environment.

When the drainage water enters the GWD, it may contain sufficient concentrations to constitute a hazardous substance. Pumping water out of the Salt Slough onto the San Luis NWR may cause the Service to be considered an operator of a facility. If the selenium is being released into the environment from the ponds on the Refuge, the Service could be considered, the owner of the facility from which hazardous substances are released. Similarly, if the Service pumps water out of Salt Slough and applies it to non-Refuge lands, it may be considered the transporter of a hazardous substance.

Because the drainage system is a natural system, the Bureau would probably not be found to be the owner or operator of a facility, as defined by CERCLA, 42 U.S.C.

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[6] For a discussion of the Department's responsibilities under section 7 of the ESA, see the discussion of Question I.A., above.

§ 9601(9) (1982), as opposed to a situation where the Bureau has constructed and operates the drainage system as with the San Luis Drain at Kesterson NWR.

A possible exception to the application of CERCLA could be found in the exemption for federally-permitted releases in Section 107(j), 42 U.S.C. § 9607(j) (1982). Discharges under Section 402 of the Clean Water Act programs are by the terms of CERCLA to be enforced under the CWA and not CERCLA. Id. In the State Water Resources Control Board proceeding on the Claus petition, the SWRCB reviewed the facts relating to the discharge of drainage water into the Grassland Water District and determined that it lacked an adequate basis on which to establish waste discharge requirements at that time. The SWRCB placed requirements on GWD to monitor and collect data to be used to develop appropriate waste discharge requirements. Therefore, at this time, the discharge of drainage water is allowed under State law in a manner which probably constitutes a "permit by rule." Although this may not technically come under the CERCLA exception, it is highly unlikely that EPA would initiate a CERCLA action when the State has considered and ruled on the acceptability of the water quality for the present.

Note also that EPA is working with the Department in the resolution of the Kesterson NWR problem and has not suggested CERCLA liability in that instance.

In addition to the responsibility to clean up hazardous wastes, CERCLA provides that federal and state trustees of natural resources can bring claims for damage to those resources resulting from a release of a hazardous substance. 42 U.S.C. § 9607(f) (1982). The resources in the San Luis NWR, and any other resources within the GWD that the Department has a statutory duty to manage and protect, are resources within the trusteeship of the Service. See 40 C.F.R. § 300.72 (1982). All those resources are similarly under the trusteeship of the State. 40 C.F.R. § 300.74 (1982). Claims for damages could be brought if there were any responsible parties against whom liability could be established.

b. RCRA

RCRA provides a comprehensive regulatory program for the management of solid and hazardous wastes. It establishes standards applicable to generators, transporters, owners and operators of hazardous waste treatment, storage and disposal facilities, and requires permits for the treatment, storage, or disposal of hazardous waste. In addition, RCRA provides that if the handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste "may present an imminent and substantial endangerment to health or environment, the Administrator [of the Environmental Protection Agency] may bring suit to restrain any person contributing to . . . such actions or take such other action as may be necessary." 42 U.S.C. § 6973 (1982).

RCRA exempts irrigation return flows from the definition of solid wastes 42 U.S.C. § 6903(27) (1982). Whether the discharges at Grasslands are irrigation return flows is a question of fact. Irrigation return flows apply to "conveyances carrying surface irrigation return as a result of the controlled application or water by any person to land used primarily for crops." S. Rep. No. 370, 95th Cong., 1st Sess. 35 (1977). The method of collection into a tiled drain does not alter the character of the runoff as return flows. Note that if the Refuge is drained, the remaining waste could lose its character as irrigation return flows and in a cleanup operation the wastes could become solid or hazardous wastes to be disposed of under proper authorities.

c. CWA

In amending the CWA in 1977, Congress specifically excluded irrigation return flows from the definition of a point source and therefore excluded them from the NPDES permit system. 33 U.S.C. § 1342(1) (1982). Irrigation return flows are, however, specifically identified as potential nonpoint sources of pollution under the Section 208 Areawide Waste Treatment Management provisions and subject to regulation under that program. 33 U.S.C. § 1288 (1982). In addition, the definition of pollutant for the CWA lists "agricultural waste discharged into water." 33 U.S.C. § 1362 (1982). Since irrigation return flows are included within the CWA meaning of pollution, the waiver of sovereign immunity in that Act is probably applicable and would provide a basis for the State to assert jurisdiction over the activities at the Refuge.

As noted above, the SWRCB has already considered whether the discharges at Grasslands violate State water laws and has allowed the discharges under controlled conditions.

If removal or remedial actions were required under CERCLA, responsibility depends on whether federal or private lands are involved. On federal lands, the federal agency which has administrative jurisdiction for the land would be primarily responsible for conducting the cleanup and paying the costs. 42 U.S.C. § 9607(9) (1982).

That party could look to any other identifiable responsible parties to share the cost. In this situation, the Service would be responsible and it is highly unlikely that it could assert that either the individual farmers or the Bureau were responsible parties. On private lands, either EPA or the State would have the lead in conducting the cleanup under Section 104, 42 U.S.C. § 9604 (1982), and would look to recover costs from any responsible parties pursuant to Section 10(a), 42 U.S.C. 9607(a) (1982). The cleanup standards would be set at a minimum by EPA or the State, 40 C.F.R. § 300.61 to 300.71 (1985), with additional protection required by the Service if necessary, to protect natural resources under the trusteeship of the Service.

If a cleanup were required under Section 7003 of RCRA, 42 U.S.C. § 6973 (1982), or under State law, the owner/operator of the facility would be responsible for conducting the cleanup and paying the costs. Id. In this instance, the Service would have responsibility on federal lands, and perhaps the private owner on private lands, depending on who applied the water to the land. Once again EPA or the State would establish minimum levels of cleanup with additional protection required by the Service as necessary to protect fish and wildlife.

Question 5. What are the Department's obligations, if any, under the National Environmental Policy Act (NEPA) for responding to the current situation at Grasslands?

Answer. Actions undertaken by the Department in response to unanticipated emergencies that require immediate action and thus do not allow for even truncated NEPA analysis will not require NEPA documentation. All other actions will. The Departmental Manual (DM) categorically excludes from the obligation to comply with NEPA "[r]outine and continuing government business . . . *having limited size and magnitude or short term effects.*" 516 DM 2, App. 1, § 1.7 (emphasis added). However, 516 DM 2, App. 2 makes clear that even a proposal covered by a categorical exclusion should be subjected to NEPA analysis if it might, among other things, adversely affect a National Wildlife Refuge, have highly controversial or uncertain and potentially significant environmental effects, be precedent-setting, or be directly related to other actions with cumulatively significant environmental effects. The Grasslands context requires that any action involving water supplies be subjected to complete NEPA analysis if time permits.

The Council on Environmental Quality (CEQ) regulations provide explicitly that, in an emergency requiring action without NEPA compliance, a federal agency may undertake the actions necessary to control the immediate impacts of the emergency. 40 C.F.R. § 1506.11 (1985). The agency should do this in consultation with CEQ. The Departmental Manual echoes this regulation by allowing a Departmental agency to undertake actions necessary to address the immediate problems presented by an unanticipated emergency. 516 DM 5.8. The agency then must consult immediately with the Office of the Solicitor, its Assistant Secretary, the Office of Environmental Project Review and CEQ on procedures for complying with NEPA with respect to future actions.

The Department therefore must prepare NEPA analyses with respect to actions that may be taken to alleviate the potential for adverse impacts on the fish and wildlife resources of the Grasslands area from continuing use of agricultural drain water. The only exception is where the Department is required by on unexpected emergency to take certain actions immediately. Even if this occurs, the Department must comply with NEPA with respect to future actions that allow time for NEPA analysis.

Question 6. What is the authority, if any, of the Secretary to deliver water from the CVP to the Grasslands areas and what is the obligation, if any, of the Secretary to obtain reimbursement for CVP water delivered for fish and wildlife purposes?

Answer. In addition to the Secretary's responsibilities with regard to the maintenance of wetlands within the Grasslands area discussed above, is his authority to deliver water to this area. Of particular concern is the scope of the Secretary's existing authority to deliver federal water from the Bureau of Reclamation's Central Valley Project in response to the various components of the subject request and the obligation, if any, for obtaining reimbursement from the Project for water delivered for fish and wildlife purposes.

a. Summary of Conclusions on Question 6

The Secretary has, specific authority, pursuant to Sections 2 and 3 of the Act of August 27, 1954, Pub. L. No. 83-674, (1954 CVP Act) to supply CVP water to certain refuges and waterfowl management areas owned and operated by the United States or the State of California for fish and wildlife purposes within the Grasslands area on a nonreimbursable basis. This means that the cost of such service is borne by taxpayers, not just the Project water users. Congress, however, imposed a general restriction on deliveries of CVP water for these purposes, making such deliveries subject to the availability of CVP water in accordance with the priorities of use established in federal and State law. Congress further restricted its authorization of the development of a water supply in the Grasslands area by requiring substantial adherence, to the recommendations made in the Department's 1950 report entitled "Waterfowl Conservation in the Lower San Joaquin Valley, Its Relation to the Grasslands and the Central Valley Project (1950 Report)." Upon consideration of this report the maximum amount of CVP water that can be supplied to refuge lands owned and operated in the Grasslands area by either the State or the United States is approximately 47,000 acre-feet. However, Congress limited the funds available for construction of works to distribute this water on refuge lands.

The Secretary also has discretion under Section 6 of the 1954 CVP Act, as amended, to contract with public organizations or agencies for the delivery of a fixed, maximum 50,000 acre-feet quantity of CVP water, on a nonreimbursable basis, when that supply of water is available and in accordance with the priorities of use specified by State law. Such contracts must comply with four specific statutory conditions in order for the deliveries to continue on a nonreimbursable basis. The possibility exists that the restrictive covenants required by one of these conditions are not sufficient and thus the reversionary provision of Section 6 has vested in the Secretary the 50,000 acre-feet of CVP water currently delivered to the GWD.

The statutory authority authorizing the Secretary to use CVP water for fish and wildlife purposes in the Grasslands area is often inconsistent and ambiguous. However, the Secretary has limited discretion to provide additional CVP water under existing authority. Sections 2 through 6 of the 1954 CVP Act were intended by Congress to provide the extent of the Secretary's authority to deliver CVP water for fish and wildlife mitigation measures in the Grasslands area of the Central Valley.

Delivery of CVP water in mounts greater than that contemplated in 1954 must be done pursuant to contract for enhancement purposes under the Fish and Wildlife Coordination Act or for irrigation, miscellaneous or municipal and industrial purposes under Section 9(c) of the 1939 Reclamation Projects Act. The Secretary could contract for the sale of the full amount of CVP water requested under this additional authority.

This interpretation gives effect to all the various congressional pronouncements regarding fish and wildlife purposes in the Grasslands area specifically, and the CVP in general. If the Secretary, particularly on a long term basis, desires to provide more CVP water on a nonreimbursable basis for fish and wildlife in the Grasslands area, we recommend seeking authorizing legislation.

b. Discussion of Conclusions on Questions 6

1. General CVP Authorization—Act of August 27, 1954, Section 1, 16 U.S.C. §§ 695d (1982)

This office has been reviewing the general issues of the authority to deliver and/or obligate Central Valley Project water for fish and wildlife purposes and the financial responsibility for the delivery of water for such purposes. In general, it is this office's opinion that fish and wildlife purposes are authorized in the CVP. The Secretary has authority, as well as an obligation, to take fish and wildlife resources into consideration in constructing the CVP.

In 1954 Congress specifically added fish and wildlife as authorized purposes of the CVP. 16 U.S.C. § 695d (1982); Act of August 27, 1954, § 1. As stated in the Senate report, "The legislation [was] intended to preserve the ducks and geese in the Pacific flyway and to assist in the prevention of depredation of crops on agricultural land." S. Rep. No. 1786, 83d Cong., 2d Sess. 2 (1954) The report of the Department explained the need for the legislation as follows:

> . . . While the provisions of the [Coordination Act] of August 14, 1946, are clearly applicable to many features of the Central Valley Project, enactment of [the legislation] would, in effect, permit a like application of its principles to the San Joaquin Valley area of the project and would remove any question concerning the availability of both funds and water for the purposes stated in the bill.
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> . . . The bill contains one other feature, namely, an authorization for the Secretary of the Interior to contract for delivery and sale of water to public organizations or agencies for waterfowl purposes in the grasslands area of the San Joaquin Valley. Since there is some question concerning the present authority

of the Secretary to make such contracts, the specific language on this subject in the bill seems desirable.[7]

The 1954 CVP Act placed fish and wildlife purposes subordinate to the purposes and priorities established in earlier CVP authorizations and reauthorizations.[8] And, correspondingly, the Act did not allocate any CVP water to fish and wildlife purposes, but rather authorized its delivery for these purposes only when supplies were available under existing allocations. 16 U.S.C. § 695j (1982). As to financial responsibility for delivery of CVP water for fish and wildlife purposes, the costs of such delivery for mitigation purposes are generally to be borne by the revenue producing functions of the project, i.e., power, municipal and industrial, and agricultural. Costs of fish and wildlife enhancement are generally to be borne by state and local entities.[9]

2. Grasslands Authorization—16 U.S.C. §§ 695d-695j-1

(a) Generally.—The 1954 CVP Act specifically authorized the Secretary to construct, operate, and maintain works on wildlife management areas and refuges owned by the United States and California in the Grasslands area and to develop a water supply for wildlife management purposes on those lands. This water supply was to be developed through drilling wells, recovering drainage, and through delivering CVP water to these areas [10] substantially in accordance with the "recommendations set forth in the Report of the United States Department of the Interior entitled 'Waterfowl Conservation in the Lower San Joaquin Valley, Its Relation to the Grasslands and the Central Valley Project' dated October 1950." [11]

In contrast to the general rule on reimbursability for fish and wildlife mitigation discussed elsewhere, Section 3 of the 1954 CVP Act directed that the costs of constructing the works and the delivery of the water to the State and federally owned and managed areas were to be nonreimbursable.[12]

(b) Reimbursability.—In Section 6 of the 1954 CVP Act, Congress further authorized the Secretary to contract with "public organizations or agencies" in the Grasslands area for delivery of CVP water on a reimbursable basis. This water was authorized to be delivered "if and when available." [13] In 1978, Congress changed its policy toward reimbursability of the water delivered to these public organizations. To discourage the conversion of privately held lands within GWD to potentially more profitable uses (such as irrigated agriculture), Congress in 1978 amended the 1954 CVP Act to provide that the water deliveries to the Grasslands area could continue on a nonreimbursable or nonreturnable basis" provided certain conditions precedent were met. Fish and Wildlife Improvement Act of 1978 (1978 Amendments).[14] In its consideration of the 1978 Amendments, Congress rejected an amendment to make the cost of water delivery to the public organizations or agencies reimbursable through CVP surplus power revenues.[15]

(c) Statutory Conditions.—The conditions set out in the 1978 amendments on which the costs of CVP water delivery to public entities could be made nonreimbursable are: (a) that these agencies deliver specified minimum amounts of water to the Fish and Wildlife Service at no cost to the United States; (b) that the agencies construct the facilities necessary to deliver this water to the Fish and Wildlife Service (Fish and Wildlife Service delivers this water to lands under its jurisdiction); (c) that the contract(s) for delivery of CVP water provide that, in the event the agency "for any reason fails to carry out" the obligations imposed by the contract or by the 1954 CVP Act as amended, both the rights of use of the facilities described in (b) and the rights to all water contracted for by the agency shall revert to the Secretary for migratory waterfowl purposes in accordance with California law; and (d) that covenants be executed restricting the use of lands within the agencies' boundaries to waterfowl and wildlife habitat conservation or other mutually agreeable uses.[16] Thus, the Secretary's statutory authority to provide nonreimbursable CVP water through the Bureau under Section 6 to these agencies is dependent on their meeting these statutory and contractual obligations. If the agencies fail to do so, their facilities and rights to CVP water revert to the Secretary for waterfowl purposes. The Grassland Water District is the only agency which has contracted with the United States for water pursuant to Section 6 of the 1954 CVP Act. As is discussed below, GWD is the only Section 6 entity that can currently contract with the Secretary since it is receiving the full quantity of CVP water Congress intended to authorize on a nonreimbursable basis to private lands in the Grasslands area.

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[7] H.R. Rep. No. 1001, 83d Cong., 1st Sess. 2-3 (1953) and S. Rep. No. 1786, 83d Cong., 2d Sess. 2-3 (1954). (This is a letter included in the House and Senate reports. It is dated July 27, 1953, addressed to Honorable A.L. Miller, Chairman, Committee on Interior and Insular Affairs, House of Representatives, from Orme Lewis, Assistant Secretary of the Interior.)

[8] 16 U.S.C. § 695d (1982). The CVP was authorized under Act of August 26, 1937 (50 Stat. 844, 850), and reauthorized under the Act of October 17, 1940 (54 Stat. 1198, 1199). See also Act of October 14, 1949 (63 Stat. 852) and Act of September 26, 1950 (64 Stat. 1036).

[9] See Question VI.B.6., *infra*, for a full discussion of this issue.

[10] 16 U.S.C. § 695e (1982), Act of August 27, 1954, ch. 1012, § 2, 68 Stat. 879.

[11] The 1950 Report is discussed in detail at pages 28-33 herein.

[12] 16 U.S.C. § 695f (1982). The specific authority, limitations thereon, and relationship of Sections 2 and 6 of the 1954 CVP Act, as amended, are discussed at pages 28-41.

[13] *Id.*, § 695i. The potential Section 2 restriction on deliveries to Grasslands contained in the 1950 Report recommendations would not apply to water deliveries to Section 6 agencies, since Section 6 of the 1954 CVP Act provides separate authority to provide water to these agencies, as well as separate restrictions.

[14] 16 U.S.C. § 695i(a-d) (1982), Fish and Wildlife Improvement Act, Pub. L. No. 95-616, § 10(a), 92 Stat. 3115, November 8, 1978. The 1978 amendments still left the delivery of water to the discretion of the Secretary, subject to the priorities of use discussed above.

[15] S. Rep. No. 1173, 95th Cong., 2d Sess. 2 (1978). Such an amendment would have brought the Grasslands authorization in line with the rest of the CVP with respect to financial responsibility at least for mitigation measures.

(d) Compliance with State Law.—Finally, Congress directed that, not only as to the general CVP fish and wildlife authorization discussed earlier, but also as to the specific Grasslands authorization, "use of all water furnished by the Secretary . . . [for fish and wildlife purposes] shall be subject to and not inconsistent with the laws of the State of California relating to priorities of deliveries and use of water"[17] California State law specifies that priority uses are domestic, municipal and irrigation; waterfowl use is subordinate to these purposes.[18] Traditionally the Secretary, acting through the Bureau, has determined whether CVP water is available for use under the if-and-when-available criterion by considering both whether there is an adequate supply of uncommitted CVP water to satisfy the request and whether there is adequate capacity in CVP facilities to deliver the water as specified in the request. If there is not an adequate supply or capacity of CVP water to satisfy all requests for water service during a particular period, the Bureau also must consider the priorities stated by Congress for CVP water service.

Under relevant provisions of the *California Water Code* (West 1971), now as in 1954, the use of water for wildlife purposes is generally subordinate to the use of water for domestic and irrigation purposes.[19] In acting on applications to appropriate, however, the State Water Resources Control Board is required to consider:

> The relative benefit to be derived from (1) all beneficial uses of the water concerned including, but not limited to, use for domestic, irrigation, municipal, industrial, preservation and enhancement of fish and wildlife, recreational, mining and power purposes, and any uses specified to be protected in any relevant water quality control plan, and (2) the reuse or reclamation of the water sought to be appropriated, as proposed by the applicant. The board may subject such appropriations to such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest, the water sought to be appropriated.

Cal. Water code § 1257 (West 1971).

Recently the California Supreme Court held in *National Audubon Society* v. *Superior Court of Alpine County,* 33 Cal. 3d 419, 189 Cal. Rptr. 346 (1983), that the State has the power "to reconsider allocation's even though those decisions were made after due consideration of their effect on the public trust." 33 Cal. 3d at 447. The full scope of this decision is not yet known. The determination of the availability of CVP water delivered pursuant to the 1954 CVP Act, as amended, as well as other general authority, however, may be affected by future actions of the California legislature and SWRCB regarding the relative priority to be accorded fish and wildlife purposes under existing CVP permits. Under the present CVP water permits and general California statutory priorities, however, it would appear that the use of CVP water service pursuant to Section 6 is to be subordinate to its use for other project purposes.

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[16] 43 U.S.C. § 695i(a-d) (1982). (See pages 39-41 for a further discussion of this provision.)

[17] 16 U.S.C. § 695j (1982). The Secretary, in a letter to Congress, stated that water from the CVP for waterfowl purposes "is to be subordinate to the priority of deliveries of water for agricultural purposes." H.R. Rep. No. 1001, 83d Cong., 1st Sess. 2 (1953). See also S. Rep. No. 1786, 83d Cong., 2d Sess. (1954).

[18] H.R. Rep. No. 1001, 83d Cong., 1st Sess. 3 (1953). See also S. Rep. No. 1786, 83d Cong., 2d Sess. 1 (1954) wherein Senate in its explanation of the bill states that Section 7 mandates that "delivery of water from the Central Valley Project for waterfowl purposes is to be subordinate to the priority of deliveries of water for agricultural purposes." H.R. Rep. No. 1001, 83d Cong., 1st Sess (1953) had the same clear statement on priority use.

[19] Cal. Water Code §§ 106 and 1254 (West 1971).

Congress also stressed that the 1954 CVP Act is not to be in any way interpreted as "an allocation of water." [20]

(e) "Substantially in Accordance" with 1950 Report.—In addition, the 1954 CVP Act further restricts the amount of CVP water that can be delivered to State and federal refuges under the specific authority contained in that Act. Section 2 of the Act directs that construction of works and development of a water supply for wildlife management purposes for the State and federal refuges were to be substantially in accordance with the recommendations made in the 1950 Report.

Prior Solicitor opinions [21] have concluded that the specific statutory language regarding the construction and operation of projects, including the weight to be given the Department's feasibility reports, may limit the Secretary's discretion to modify project features and operations beyond what the language or referenced report describes. Thus, Congress may, as it did herein, direct that a project be built and operated as it was proposed prior to congressional approval, by requiring the Secretary to construct "substantially in accordance with" the Department's feasibility report. In other authorizations, Congress has approved construction and operation of a proposed project without direction to construct and operate substantially in accordance with pre-authorization reports. In those cases, the Secretary has broad discretion to change project features and operations from the original proposals presented to Congress so long as the general sense and purpose of Congress is implemented. See *Morton* v. *Mancari*, 417 U.S. 535, 551 (1974); *Cabel* v. *Markham*, 148 F.2d 737, 739 (2d Cir. 1945), *aff'd.*, 326 U.S. 404 (1945). The Section 2 authority is, however, the former type of statute where the Congress has substantially limited the Secretary's discretion to modify the authorized project and his operational and management options.

3. Specific Request for Water Service to Federal and State Refuges and Waterfowl Management Areas—16 U.S.C. §§ 695e-g

As is specified in Section 2 of the 1954 CVP Act, the Secretary can supply water available from CVP sources to waterfowl management areas and refuges owned and operated by the United States or by the State of California. The cost of the delivery of water pursuant to this authority is nonreimbursable. 16 U.S.C. § 695f (1982). However, Congress set a limit of $400,000 on the amount authorized to be appropriated "for construction of necessary works to supply water for State and federally owned and operated waterfowl management areas. . . ." Id. at § 695g. Thus, in the following discussion of the subject request for additional CVP water for federal and State refuge lands, it is assumed, *arguendo*, that such "necessary works" are or may be made available under the appropriation ceiling.

As is set forth in detail in the following discussion the total amount of CVP water authorized under Section 2 to be furnished, if available, to federally and State owned and operated refuge lands, is approximately 47,000 acre-feet. This amount may be distributed among all federally and State owned and operated refuge lands in the Grasslands area, interchangeably, in substantial accordance with the recommendations set forth in the 1950 Report. This conclusion is based on the determination that the various federally and State owned and operated refuge lands in the Grasslands area are either identical to or serve the same basic functions as the refuges and wildlife management areas described in the 1950 Report.

(a) Federal Lands.—As an initial matter, note the determination that the federal easement lands are not "owned and operated" by the United States within the meaning of Section 2 of the 1954 CVP Act. Both the House and Senate reports [22] stated that

> This bill has two purposes: (1) To provide for works to furnish a water supply on State of California and Federal waterfowl management areas; and (2) to permit the Secretary of the Interior to sell water for waterfowl purposes to water districts and other public agencies when the water is surplus to agricultural, domestic, and municipal needs as specified in the priorities established under State law.

Recommendations 2 through 4 of the 1950 Report discussed the "State of California and Federal Waterfowl Management Areas" to be delivered a supply of water. All these areas specifically discussed in the 1950 Report were owned in fee by the United States and the State. There was no discussion of easements or easement areas in the context of the 1954 CVP Act.

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[20] 16 U.S.C. § 695(j) (1982).

[21] Westlands Water District—Legal Questions, M-36901, 85 I.D. 297, 302 (1978); Adequacy of Legislative Authorization for the San Felipe Division, Central Valley Project, California, M-36903, 85 I.D. 337, 339 (1978).

[22] *Supra*, n. 18.

Additionally, recommendation 5 of the 1950 Report stated that

> Drainage and underground waters be developed to perpetuate the grasslands area as waterfowl habitat. It is suggested that this be accomplished by the landowners in the Grasslands through the formation of a special district, (a) to conserve and develop water for all useful purposes, including the conservation of waterfowl, and (b) to contract with other agencies for assistance in accomplishing these objectives.

1950 Report at 118.

And recommendation 6 provided that in the event the landowners did not form a special district, then additional waterfowl management areas be acquired by the State and Federal Government and "the water supply for such management areas should be developed by the Bureau of Reclamation." Formation of the GWD prior to the 1954 CVP Act vitiated the need for implementation of recommendation 6.

Sometime after the 1954 CVP Act was passed, the Service began buying easements on privately owned lands. These easements burden the title to the land, but do not constitute either an ownership of the fee title or provide for management responsibilities in the United States. While these lands are to be maintained in a manner consistent with waterfowl use and habitat, they are still private lands operated and managed by the private landowners to which Congress did not authorize providing nonreimbursable CVP water.[23] Therefore, these lands are not eligible for a supply of CVP water pursuant to the authority of Section 2, notwithstanding the status of these lands as part of the National Wildlife Refuge System under the provisions of the NWRSAA, 16 U.S.C. § 668dd (1982).

The recommendations set forth in the 1950 Report with respect to federally owned and operated refuges and waterfowl management areas are in most relevant part:

> (4) There be developed, as an added feature of the Central Valley Project, a water supply to supplement existing rights, in accordance with the Schedule in Appendix B [Table 14] of the report, for a proposed 12,000-acre Federal waterfowl management area in Merced County east of the San Joaquin River; provided that, should it be necessary for the Fish and Wildlife Service to make interim arrangements for water for this management area, such arrangements not be construed as substitution, in whole or in part, for the water to be developed under the Central Valley Project.
>
> This program contemplates that the management areas would be acquired, developed, and operated by the Fish and Wildlife Service and the State of California while the water supplies for these areas would be provided or developed by the Bureau of Reclamation through additional authorization of the Central Valley Project.
>
> . . . About 40,000 acre-feet will be required for the proposed Federal area discussed in recommendation (4). This amount will also be developed from other than existing Project sources, under supplementary authorization.

1950 Report, at 117-19 (footnote omitted).

To date, the United States has acquired approximately 2,500 acres on the east side of the San Joaquin River constituting the Merced National Wildlife Refuge (Merced NWR). The water supply for this refuge currently is obtained pursuant to a permit granted by the SWRCB (maximum diversion of 3,000 acre-feet per year—Permit No. 19473, issued May 3, 1985), from diversions of excess water releases from the Friant Dam through the east side bypass of the San Joaquin River, and from deep groundwater wells on the property. The Service has not requested CVP water for this refuge as part of the pending request for additional water deliveries to the West Grasslands area, but instead has requested 19,000 acre-feet for the San Luis NWR, 6,500 acre-feet for the Kesterson NWR, and 29,200 acre-feet for the easement lands outside the boundaries of the Grassland Water District.

In contrast to the Merced NWR, the remaining components of the San Luis NWR complex (San Luis NWR and Kesterson NWR) are not specifically identified or discussed in the 1950 Report. As discussed above, these lands serve what is substantially the same purpose as the federal refuge proposed in the 1950 Report. Thus, the refuges can be furnished a limited amount of CVP water pursuant to Section 2 of the 1954 CVP Act, "substantially in accordance with the recommendations" of that Report.

The total amount of CVP water requested for the San Luis NWR and Kesterson NWR (25,500 acre-feet) is within the amount specified as needed for the proposed 12,000 acre Merced NWR (40,000 acre-feet) in the 1950 Report. Therefore, the Secretary is authorized to deliver the requested water, if available, on a nonreimbursable basis under the authority of Section 2 of the 1954 CVP Act. However, in reaching this conclusion, the Service must have the ability to take delivery of any available water through facilities authorized in accordance with Sections 2 and 3 of the 1954 CVP Act. Moreover, note that any deliveries of CVP water to federally owned and operated refuges other than Merced NWR must be in lieu of deliveries of that amount of water to Merced NWR.

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[23] Water delivery to private lands burdened by easement within the GWD is discussed in Question VI.B.4.

(b) State Lands.—The Service has indicated an annual need of 18,900 acre-feet of CVP water for the Los Banos Wildlife Management Area, and 6,000 acre-feet of CVP water for the Volta Wildlife Management Area. Memorandum dated June 18, 1985, *supra*. It is understood that these management areas are owned and operated by the State of California.

The 1950 Report identified and discussed three State waterfowl management areas: the Los Banos State Waterfowl Management Area; the Madera State Waterfowl Management Area; and the San Luis Creek Holding Reservoir. With respect to the Los Banos Waterfowl Management Area, the 1950 Report recommended:

> (2) There be developed from indigenous sources or made available from existing project sources other than Millerton Lake, as an added feature of the Central Valley Project, such water supply as is necessary to supplement existing rights so as to provide 13.0 second feet on the Los Banos State Waterfowl Refuge.
>
> (3) There be developed from indigenous sources or made available from existing project sources other than Millerton Lake, as an added feature of the Central Valley Project, a water supply to supplement existing rights, in accordance with the schedule in Appendix A of the report, for a proposed enlargement of the Los Banos State Waterfowl Refuge having an area of 6,700 acres.
>
> Not to exceed 7,000 acre-feet of water from existing Project sources will be made available annually, under such supplementary authorization, for waterfowl management areas to supplement existing rights as outlined under recommendations (2) and (3) above. *If amounts in excess of 7,000 acre-feet are needed they are to be developed from return flows or from underground sources as an added feature of the Project,* also under supplementary authorization.

1950 Report at 117, 119 (emphasis added) (footnote omitted).

At present, the State of California receives 7,000 acre-feet of CVP water annually pursuant to Section 2 of the 1954 CVP Act and the recommendations in the 1950 Report. Contract No. 14-06-200-4359A, art. 2(b) (and Recitals). This supply of water is furnished from the Mendota Pool to the Mendota Waterfowl Management Area. *Id.* Also pursuant to Contract No. 14-06-200-4359A, the State receives up to 12,000 acre-feet of CVP water from the Mendota Pool for use on the Mendota Waterfowl Management Area under the authority of Section 6 of the 1954 CVP Act. This supply of CVP water, discussed *infra*, does not affect our analysis of the Secretary's authority under Section 2 of the 1954 CVP Act. Additionally, the State can receive up to 4,000 acre-feet of CVP water annually, if available, for use on its wildlife management areas in Merced County. Contract No. 14-06-200-3342A. CVP water furnished pursuant to this contract is now used on the Volta Wildlife Management Area.

Therefore, in accordance with the discussion above, any additional CVP water service to State owned and operated refuge lands in the Grasslands area must be in lieu of Section 2 deliveries to federally owned and operated refuge lands, and that the total of such CVP water deliveries cannot exceed approximately 47,000 acre-feet. As was noted above, the amount of CVP water requested for delivery to federally owned and operated refuges is 25,500 acre-feet. Adding this amount to the amount of CVP water now furnished to State owned and operated refuge lands, 11,000 acre-feet, it is calculated that approximately 10,500 acre-feet more of CVP water, if available, can be furnished to the State owned and operated refuge lands (including the Los Banos and Volta wildlife management areas) pursuant to Section 2 of the 1954 CVP Act. Amounts substantially in excess to this quantity would not be "substantially in accordance with the recommendations" made in the 1950 Report. Thus, unless some downward adjustment of the amount of CVP water for federal and other State refuge lands is made, the full amount of CVP water requested to be furnished to the Los Banos Wildlife Management Area, 18,900 acre-feet, could not be supplied, at least on a permanent basis, in accordance with the Secretary's authority under Section 2 of the 1954 CVP Act.

4. *Water Service to Privately Owned Lands Within the Grasslands Area—16 U.S.C. §§ 695i and j-1*

Section 6 of the 1954 CVP Act, as amended by Section 10(a) of the Fish and Wildlife Improvement Act of 1978, 16 U.S.C. § 695i (1982), authorizes contracts for the delivery of CVP water to public entities under certain specified conditions.[24]

In Section 10(b) of the 1978 Amendments, Congress added a new section to the 1954 CVP Act to authorize the Secretary "to negotiate amendments to existing contracts to conform said contracts to the provisions of sections 695d to 695j-1 of the title." 16 U.S.C. § 695j-1 (1982).

As is explained in the following discussion of the Secretary's authority under Section 6, the maximum amount of CVP water the Secretary is authorized to deliver to private lands within the Grasslands area is 50,000 acre-feet—the amount now supplied, when available, under contract with the GWD. The determination of the availability of this CVP water supply is subject to the priorities for water use under State law, notwithstanding apparent agreement to the contrary in the operative contract with the GWD. Reformation of existing restrictive covenant language may be necessary to support continued water service to the GWD in accordance with Section 6; if GWD fails to meet its obligations under Section 6, the Secretary is authorized to contract with a new public entity, on a nonreimbursable basis, to furnish that entity a maximum of 50,000 acre-feet of CVP water—if and when available.

The Maximum Quantity of CVP Water Authorized to be Supplied under Section 6 of the 1954 CVP Act, as amended, is 50,000 acre-feet.

The express language of Section 6 of the 1954 CVP Act, as amended, does not identify a maximum quantity of CVP water that the Secretary is authorized to supply to the Grasslands area under contract with a public entity. However, from a reading of the 1954 CVP Act as a whole, in connection with its legislative history and that of the 1978 amendment to Section 6, it seems that Congress intended to authorize nonreimbursable CVP water service only within the limitation of 50,000 acre-feet specified in Contract No. 14-06-200-4658A, executed December 27, 1969, amended December 6, 1980.

Notwithstanding the lack of any recommendation in the 1950 Report for a supply of CVP water for wildlife management purposes on private lands,[25] Congress did in the 1954 CVP Act expressly authorize CVP water service to public entities that supply privately owned lands, "[i]f and when available . . . at a charge not to exceed the prevailing charge for class 2 water." Pub. L. No. 83-674, § 6. As stated in the Senate and House reports on the 1954 legislation:

> This bill has two purposes: . . . (2) to permit the Secretary of the Interior to sell water for waterfowl purposes to water districts and other public agencies when the water is surplus to agricultural, domestic, and municipal needs as specified in the priorities established under State law.

S. Rep. No. 1786, 83d Cong., 2d Sess. 1 (1954); H.R. Rep. No. 1001, 83d Cong., 1st Sess. 1 (1953).

Pursuant to this authority, the Department entered into a contract with the GWD in 1956 under which the GWD was to be supplied up to a maximum of 30,000 acre-feet of CVP water, if and when available, at a charge not to exceed the prevailing rate for class 2 water—$1.50 per acre-foot. In 1969, the GWD, the Bureau and the Service entered into a cooperative agreement, Contract No. 14-06-200-4658A, amending the 1956 contract to provide, among other things, for a maximum supply of 50,000 acre-feet of CVP water to the GWD at $.10 per acre-foot.[26]

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[24] *Supra*, page 25.

[25] See 1950 Report at 118.

[26] The contract specified the following conditions:

> . . . The amount of water to be furnished at $0.10 per acre foot shall be established as follows: The entire 50,000 acre feet of water shall be furnished at $0.10 per acre foot in any year that 80% or more of District lands are covered by the covenant of restrictive use. In any year that less than 80% of the total District lands are covered by covenants the amount to be furnished at $0.10 per acre foot shall be in direct proportion to 30,000 that the land under covenants bears to the total acreage of the District. To the extent required, Article 7 of said Contract [No. 14-06-200-3447A] is hereby modified accordingly; the other terms and provisions of said Contract shall remain in force and effect. The provisions of this article relative to quantity of water to be furnished and applicable rate to be paid therefore are in consideration of the assumption by the District of the obligation to effect the required improvements in the water transport and distribution system in a manner approved by the United States, and in consideration of the additional obligations and undertakings of the District set forth in this agreement.

Contract No. 14-06-200-4658A, art. 5.

A further condition of CVP water service imposed in this cooperative agreement was:

> 10. The District shall furnish without charge to the United States 3,500 acre-feet of winter water for use by the BSFW [Service] in waterfowl management on the Kesterson Reservoir lands. In addition, the District will supply to the BSFW, without charge to the United States, at least 4,000 acre-feet of summer waste water when available, for waterfowl management on Kesterson Reservoir lands. Delivery points are to be mutually agreed upon.

Contract No. 14-06-200-4658A, art. 10.

To further encourage conservation of wildlife habitat on private lands in the Grasslands area, Congress acted in 1978 to amend the Secretary's authority under Section 6 to provide for CVP water service to continue to privately owned lands on a nonreimbursable basis. Legislation for this purpose was first introduced in the Senate as S. 691.[27]

From the legislative history of the 1978 amendment to Section 6 of the 1954 CVP Act, it is clear that Congress contemplated that nonreimbursable CVP water service to private lands in the Grasslands area would be limited to the maximum 50,000 acre-feet provided under the 1956 and 1969 contracts with the GWD.[28] Thus, while Section 6, as amended, does not expressly identify a maximum amount of CVP water that is authorized to be supplied to the GWD, the Congress did not intend to authorize the Secretary to supply more than a maximum of 50,000 acre-feet of CVP water per year to private landowners in the Grasslands area under the amendment.[29]

5. *Miscellaneous Issues*

There are a number of additional issues discussed below that relate to the Secretary's responsibilities in regard to the Grasslands area in general, and the GWD in particular. These issues relate particularly to the enforceability of the cooperative agreement with GWD and the meaning of the language in Section 7 of the 1954 CVP Act that water deliveries and use are to be in accordance with the priorities specified in State law. Resolution of any or all of these issues may be of varying degrees of importance herein depending on the course of action the Secretary decides to take on the subject request.

(a) "Irrigation" Deliveries to the Grassland Water District.—In its most recent cooperative agreement with the Grassland Water District, Contract No. 14-06-200-

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[27] Ultimately, the language of S. 691 was attached to H.R. 2329, 124 Cong. Rec. 31,432 (1978), and was enacted as section 10(a) of the Fish and Wildlife Improvement Act of 1978. The report accompanying this bill explained in its background:

> While there are two national wildlife refuges in this section of the San Joaquin Valley, over half of the managed waterfowl lands are controlled by private property owners, including the members of the 46,000-acre Grassland Water District. In 1954, Congress passed legislation which reauthorized the Bureau of Reclamation's Central Valley Project, in the San Joaquin Valley, incorporating for the first time fish and wildlife conservation as a specific project purpose. The act authorized the Secretary of the Interior to deliver water to public agencies, including the Grassland Water District, for developing and maintaining migratory waterfowl habitat, and to levy a charge for such water service at rates not to exceed the prevailing rate for class 2 agricultural water services.
>
> The Grassland Water District members currently manage their lands both as native pasture for livestock production and wetlands for wintering waterfowl. Unfortunately, higher land taxes and operating costs are forcing some of these individuals to convert their property from wildlife conservation to more economically attractive land-intensive uses such as sugar beet or cotton farming. If this continues to occur, the Secretary of the Interior will have to move under existing authority to acquire the private lands of the Grassland Water District for wildlife habitat. Acquisition of the land has already been approved by the Migratory Bird Conservation Commission, the Merced County Board of Directors, and the California State Fish and Game Commission.
>
> S. 691 provides an incentive to landowners to conserve their lands for waterfowl by removing the charge for Central Valley Project water which is delivered to the Grassland Water District for waterfowl conservation.

S. Rep. No. 1178, 95th Cong., 2d Sess. 1 (1978).

[28] S. Rep. No. 1173, *supra* n. 15, at 2: "The legislation would result in a reduction of water service revenues at an approximate rate of $5,000 per year, for a total of $250,000 over the next 50 years. The alternative to the legislation, acquisition of the area by the Federal Government between $14 million to $20 million, according to the Interior Department. [Sic] This alternative would have the added adverse effect of removing land from the tax rolls of State and local jurisdictions."

[29] Also the total maximum supply of CVP water now requested by the Grassland Water District, 165,000 acre-feet per year for 52,000 acres (see Memorandum dated June 18, 1985, *supra*) is substantially more on a supply-per-acre basis than the historical supply of water to the Grasslands area reported in the 1950 Report. See *supra* n. 28-33.

4658A, art. 1, executed December 6, 1980, the Department stated: "it is further agreed that the use of said water shall be deemed for irrigation purposes." Under the Reclamation Act of 1937, the use of CVP water for "irrigation purposes" is subordinate only to the use of project facilities "for river regulation, improvement of navigation, and flood control." Act of August 26, 1937, Pub. L. No. 75-392, 50 Stat 844, 850. In accordance with the above discussion, however, it may be questioned whether this provision of the cooperative agreement affects the status under State law of water service for wildlife purposes pursuant to Section 6, notwithstanding the intention of the parties to the agreement.[30]

Congress intended, according to the 1954 CVP Act and its legislative history, that water was to be furnished for the purpose of waterfowl management only, and in accordance with the priorities for such water delivery under California law. Irrigation is not a purpose for which the Secretary is authorized to contract with the Grassland Water District under the 1954 CVP Act, as amended.[31] This fact alone does not, however, invalidate the 1980 contract. It may, however, invalidate the "sharing in time of shortages" provision.

(b) The Secretary's Discretion with Respect to the Conditions of Nonreimbursable Water Service under Section 6 of the 1954 CVP Act, as amended.—Section 6 of the 1954 CVP Act, as amended, specifies that the cost of CVP water service to a public entity for use in the Grasslands area, if and when available, "*shall not be* reimbursable, or returnable under the Federal reclamation laws" (emphasis added). Section 6 further provides that for such delivery of water "to continue on a nonreimbursable or nonreturnable basis," certain conditions must be met. Together, these provisions appear to require that any contract for water service pursuant to Section 6 that is executed after the 1978 amendment thereof *must* provide that CVP water be furnished on a nonreimbursable basis, and further, that such water service *must* be in accordance with the conditions on nonreimbursable service specified in Section 6, as amended. The specified conditions on nonreimbursable water service pursuant to Section 6, as amended, were delineated at page 25, *supra*. The cooperative agreement executed by the GWD, the Bureau and the Service on December 6, 1980, Contract No. 14-06-200-4658A, contains each of the required conditions.

(c) It Appears that GWD has Failed to Meet the Requirement under Section 6 for Restrictive Covenants Limiting the use of Private Lands within the District.—The cooperative agreement executed by the GWD, the Bureau and the Service on December 6, 1980, Contract No. 14-06-200-4658A, expresses each of the required conditions, including the provision on covenants. But examination of the deed to one property within the GWD reveals that the restrictive covenant language actually in use in GWD may not be in accordance with the requirement of 16 U.S.C. § 695i(d) (1982). This restrictive covenant provides in part:

> THE LANDOWNER AGREES that he will use and maintain all of his land under this covenant in a manner compatible with wildlife use and waterfowl habitat. It shall be within the sole discretion of the Board of Directors of the District to determine whether use and maintenance are being developed for native pasture and waterfowl consistent with the provisions of the Cooperative Agreement and Habitat Management Plan.
>
> THE LANDOWNER FURTHER AGREES that during the term of this agreement, the District, the Bureau of Reclamation, and the Bureau of Sport Fisheries and Wildlife personnel have the right to enter upon his land at reasonable times to inspect the adequacy of land uses, the maintenance and repair of

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[30] The subject provision of the cooperative agreement evidently is based on a memorandum dated December 7, 1979, to the Assistant Secretary, Land and Water Resources, from Solicitor Krulitz. In this memorandum, Solicitor Krulitz concluded:

"In short, the congressional priorities must not be applied in the context of a single contract or a single small facet of an enormous project, but from the perspective of project operation as a whole. For this reason, it is plain that the Grasslands contract is consistent with the statutory priorities."

Memorandum at 4. The problem with this conclusion is that Solicitor Krulitz did not discuss or even refer to Section 7 of the 1954 CVP Act when reaching it. I do, however, agree with the rationale of the December 7, 1979, Solicitor's Opinion insofar as it concludes that the Secretary has some discretion in allocating water beyond absolute compliance with State priorities. In other words, all requests for domestic or agricultural uses do not necessarily have to be satisfied before any water can be provided for fish and wildlife.

[31] Because irrigation is not a purpose for which the GWD can use CVP water under its contract, this contract and any amendment or revision thereof would not bring the District under the Reclamation Reform Act of 1982 (RRA). 43 U.S.C. §§ 390aa et seq. For a water user to come under the RRA, it must have a contract as defined in the RRA, 43 U.S.C. § 390bb(1). The Grassland contract for waterfowl purposes does not come under this definition.

> canals and ditches, and the effect of the water distribution practices upon the wildlife habitat.
>
> BE IT FURTHER AGREED that the Landowner may terminate this agreement by giving the District 90 days advance notice delivered by registered or certified mail to the District office, 610 West Pacheco Blvd., Los Banos, California, and upon payment to the District of a sum being the difference of water received at a rate less than $2.00 per acre foot to $2.00 per acre foot delivered by the District annually to the Landowner under the provision of this agreement and during the period and term of this agreement then expired for water delivered between September to December of each year, and the further sum being the difference of return-flow drain waters supplied at less than $.75 for each acre-foot to the charge of $.75 for each acre foot annually from the first day of January to the fifteenth day of September as delivered by the District to the Landowner for the performed period of this agreement and under the provisions of this agreement. Provided, that the amounts so due and payable shall be a lien upon the land described herein until paid.
>
> THAT upon the termination of the Cooperative Agreement and Habitat Management Plan being Contract No. 14-06-200-4658A by either the United States or the Grassland Water District, or upon the termination of participation by the Landowner under this agreement that all rights, duties, obligations and liens imposed under this contract shall cease and become null and void, and all parties return to the duties, obligations, rights and benefits of Contract No. 14-06-200-6106 between the United States and the Grassland Water District.

There are several apparent problems with this language: (1) it does not require use of the land for the purpose of waterfowl and wildlife habitat conservation, but rather merely requires that use of the land be "in a manner compatible with wildlife use and waterfowl habitat"; (2) it leaves the determination of whether a particular use of the land is authorized to the sole discretion of GWD; and (3) it provides for continuing water service on a reimbursable basis upon the termination of the cooperative agreement. Even assuming, *arguendo*, that the Department may have examined and approved the restrictive covenant language in connection with its execution of the 1980 amendatory agreement, the covenant may not be sufficient as a matter of law to satisfy Section 6 of the 1954 CVP Act, as amended. Whether the covenant requirement of Section 6 and the 1980 contract have as a matter of fact been violated is an issue as to which there is insufficient information.

(d) Failure of a Contractor to adhere to the Conditions of Nonreimbursable Water Service under Section 6 of the 1954 CVP Act, as amended.—As noted above, one of the conditions of continuing water service pursuant to Section 6 of the 1954 CVP Act, as amended, is:

> . . . that in the event the public organization or agency for any reason fails to carry out the obligations imposed upon it by said contract or by sections 695d to 695j-1 of this title, the rights of use of any facilities referred to in subsection (b) of this section, and the rights to all water contracted for by the organization or agency pursuant to sections 695d to 695j-1 of this title shall revert to the Secretary of the Interior for migratory waterfowl purposes in accordance with the laws of the State of California; and. . . .

16 U.S.C. § 695i(c) (1982). Under this condition if a contractor fails to meet its obligations under a Section 6 contract, the water currently under contract reverts to the Secretary and the contractor must be precluded from any new Section 6 contract for CVP water service except in strict compliance with Section 6. The legislative history of the 1978 amendment indicates nothing to the contrary.

Because the GWD covenant provision examined above may not be sufficiently restrictive, the reverter provision of Section 6 may have been triggered. Under this circumstance, continued service to GWD under the existing agreement would not be authorized. But, the Secretary could enter a new agreement with GWD if GWD would take steps to bring its covenants into accord with Section 6. In so doing, the Secretary would have authority to require GWD to deliver to the Service an amount of CVP water greater than the 3,500 acre-feet presently being delivered. Furthermore, the Secretary may have authority to market CVP water in addition to the 50,000 acre-feet to the GWD or other entities in accordance with the general requirements of State and federal law, and CVP water marketing procedures. The authority for such contracts would be Section 9(c) of the 1939 Reclamation Projects Act. 43 U.S.C. § 485h(c) (1982).

(e) Authority to Enter Wheeling Agreement with State Water Project.—A question may arise as to the Secretary's authority to use nonfederal facilities to deliver additional CVP water to the Grasslands area. The Secretary has that authority, as specified below.

On or about March 20, 1985, the Regional Director, Bureau of Reclamation, Mid-Pacific Region, and the Director, Department of Water Resources (DWR), State of California, entered into Letter Agreement No. 5-07-20-W0401. That Agreement provides that the DWR will wheel CVP water through available capacity in State Water Project (SWP) facilities to certain potential CVP water users ifs: (1) the Bureau makes the CVP water available in the Delta, (2) the Bureau provides the CVP power needed to pump that water through the Banks Pumping Plant and the DWR's share of Dos Amigos Pumping Plant and (3) the Bureau or the other purchaser of the wheeled water pays the DWR a wheeling charge for the use of SWP facilities. The Regional Director entered into that agreement with the DWR so that CVP water could be delivered for authorized uses within the authorized service area of the CVP when CVP facilities are not available for such deliveries. As such, it is an agreement necessary and proper for the purposes of carrying out the provisions of the Reclamation Act of 1902 into full force and effect, and therefore is authorized by Section 10 of the Reclamation Act of 1902, 43 U.S.C. § 373 (1982). The agreement could be amended to cover any additional water delivered to Grassland Water District. The expense would be borne by GWD because it would be receiving the water at municipal and industrial rates pursuant to a standard water service contract.

Section 2 of the Act of August 27, 1954, authorizes the Secretary to furnish CVP water to waterfowl management areas and refuges owned and operated by the State of California or the United States substantially in accordance with the report specified therein. Section 3 of the 1954 CVP Act further provides that such water deliveries "shall not be reimbursable or returnable under the Federal reclamation laws. . . ." Although it is not clear, an argument can be made that the Bureau, in lieu of the owner and operator of the wildlife management area or refuge, must pay the DWR the wheeling charges for the use of the SWP facilities. Such charges, as well as the cost of CVP power provided to pump the water through the SWP pumping plants, would have to be considered costs incurred pursuant to the federal reclamation laws to operate the CVP in the manner necessary to fulfill its authorized purposes.

6. The Secretary's General Authority to Provide CVP Water for Fish and Wildlife Purposes in Grasslands

If the authority under Sections 2 through 6 of the 1954 CVP Act for State and federal facilities and CVP water delivery in the Grasslands area is limited to the recommendations set out in the 1950 Report, then the Secretary must resort to general CVP and Fish and Wildlife Coordination Act (FWCA)[32] authority to provide water in excess of those recommendations. However, the issue remains to what extent these authorities allow the Secretary to modify CVP operations to mitigate CVP damage or enhance fish and wildlife in the Grasslands area in addition to the specific authority of the 1954 CVP Act. In fact, Congress' specific authorization of wildlife activities in Sections 2 through 6 of the 1954 CVP Act and its explanation of the purpose of the legislation raise the question whether the authority of the 1954 CVP Act was intended to satisfy the requirements of the 1946 Coordination Act as to the Grasslands area and thus preempt any further action under general authority.

The Department's recommendation, reprinted in the Senate and House reports, on the 1954 CVP Act explained the purpose of the legislation:

> The objective of H.R. 4213 is primarily to *mitigate or forestall damages to or losses of fish and wildlife resources caused by the construction of the Central Valley Project.* The nature and extent of the detriments to fish and wildlife caused by that project in the lower San Joaquin Valley are outlined in detail in the [1950 Grasslands report]. *Thus, the principle involved in the proposed legislation is in full accord with the provisions of the [1946 Coordination Act],* which require that appropriate consideration be given to the needs of waterfowl and other fish and wildlife resources affected adversely by Federal water development projects. While the provisions of [the Coordination Act], are clearly applicable to many features of the Central Valley Project, enactment of [the legislation] would, in effect, permit a like application of its principles to the San Joaquin Valley area of the project and would remove any question concerning the availability of both funds and water for the purposes stated in the bill.[33]

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[32] For purposes of this discussion, the Fish and Wildlife Coordination Act or FWCA will be used to refer to the most recent version of that Act. The earlier 1946 version will be referred to as the Coordination Act or 1946 Coordination Act.

[33] H.R. Rep. No. 1001, 83d Cong., 1st Sess. 2-3 (1953) and S. Rep. No. 1786, 83d Cong., 2d Sess., 3-4 (1954) (emphasis added).

The above-quoted language reflects that Congress intended the specific authority of the 1954 CVP Act to provide for mitigation of CVP wildlife damage in the Grasslands area in full accord with the provisions of the 1946 Coordination Act. In other words, although the 1946 Coordination Act was in place in 1954, Congress considered it insufficient to authorize the Secretary to take action to mitigate fish and wildlife losses in the CVP. Therefore, Congress passed the 1954 CVP Act. The specific provisions of the 1954 CVP Act authorized an extensive mitigation program for the CVP to cure the perceived shortcomings of the 1946 Coordination Act with respect to the Grasslands area of the CVP. There is no evidence that Congress, in passing the 1954 CVP Act, intended the Secretary to have further authority under the Coordination Act to take action in the Grasslands area in addition to the extensive mitigation program specifically outlined in the 1950 Report and adopted in the 1954 CVP Act.

If Congress limited the Secretary's mitigation authority to the specific program and amounts of CVP water found in the recommendations of the 1950 Report, then the Secretary is precluded from taking further action under the 1954 CVP Act not substantially in accordance with the recommendations made in the 1950 Report. At a minimum, he is precluded from classifying as mitigation any measures taken which are not substantially in accordance with the Report recommendations. This limitation restricts the Secretary's authority with respect to assigning financial responsibility for additional measures including water deliveries.

The issue remains whether the general CVP authorizations and Fish and Wildlife Coordination Act authority allow the Secretary to modify existing CVP facilities and operations for mitigation or enhancement purposes.

As discussed above, Congress specifically added fish and wildlife as an authorized purpose of the CVP in Section 1 of the 1954 CVP Act—subject to the purposes and priorities established in earlier CVP authorizations [34] and State law. 16 U.S.C. §§ 695(d), (j) (1982), Act of August 27, 1954, §§ 1, 7. However, Section 1 provides little additional authority standing alone. Generally, the Secretary requests congressional authority to take particular action, i.e., to add previously unauthorized features to an already authorized project, to change substantially the purposes or operations of an existing project, or to build a new project. Thus, the addition of fish and wildlife as an authorized purpose of the CVP in Section 1 of the 1954 CVP Act provides little or no additional authority to take any specific action unless read in conjunction with other authorities that allow the Secretary to act. One such authority is the Fish and Wildlife Coordination Act.[35]

As discussed above, passage of the 1954 CVP Act first demonstrated Congress' understanding that the 1946 Coordination Act, as it was called then, had limited application to projects such as the CVP which were already authorized and under construction. In order to correct previously unmitigated CVP damage, Congress believed that specific authority was necessary—the 1946 Coordination Act by itself provided questionable authority for such an undertaking. This is reflected in the Senate and House reports, quoted above, on the 1954 CVP Act. Those reports explicitly raised the question of the application of the 1946 Coordination Act to the fish and wildlife measures being considered for implementation in the Grasslands area. Therefore, Congress authorized specific action to mitigate previous CVP damage to fish and wildlife in this area.

Congress again demonstrated its perception of the limits of the 1946 Coordination Act when it enacted the 1958 amendments to the Coordination Act and renamed the amended version the Fish and Wildlife Coordination Act (FWCA).[36] Believing that the 1946 Coordination Act was ineffective and that additional authority was needed to authorize fish and wildlife modifications on uncompleted projects authorized before 1958, Congress amended Section 2c of the Coordination Act to provide:

> Federal agencies authorized to construct or operate water-control projects are authorized to modify or add to the structures and operations of such projects, the construction of which has not been substantially completed on the date of enactment of the Fish and Wildlife Coordination Act . . ., in order to accommodate the means and measures for such conservation of wildlife resources as an integral part of such projects. . . .

16 U.S.C. § 662(c) (1982). According to the Senate report, the purpose of the FWCA was to grant "authority to the agencies of Government engaged in construction to

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[34] 16 U.S.C. § 695(d) (1982). See also supra n. 8.

[35] 16 U.S.C. §§ 661 et seq. (1982).

[36] 16 U.S.C. §§ 661 et seq. (1982). Section 1 of the Act of August 12, 1958, renamed the 1946 Coordination Act, providing that "the Act of March 10, 1934, as amended, and as further amended by this Act may be cited as the 'Fish and Wildlife Coordination Act'." Id.

consult with the Fish and Wildlife Service *before and during* the building of Federal water development projects." S. Rep. No. 1981, 85th Cong., 2d Sess. 1 (1958) (emphasis added). The Report discussed the deficiencies in the 1946 Coordination Act which Congress intended to correct by passing the 1958 FWCA:

> Existing law is of questionable application to many authorized projects, a very serious shortcoming. The Corps of Engineers, for example, has *a backlog of* 650 active *authorized projects* with an estimated cost of about $6 billion *on which construction has not yet started.* Many of these cover vast areas, containing some of the most important fish and wildlife resources of the Nation. *The Bureau of Reclamation has about 150 projects or units* at an estimated cost of $3.7 billion *in this category. Most of these projects have never been investigated from the standpoint of their effects on fish and wildlife resources.* Many of them were authorized 15 or 20 years ago or more. It would make good sense to have the policies and procedures of the Coordination Act applicable to them in order that the wishes of the Congress in enacting the 1946 statute and the proposed amendments can be observed.

Id. at 4. Thus, the 1958 FWCA gave the Secretary retroactive as well as prospective authority, allowing the Secretary to modify features and operations of projects which were authorized but not completed at the time the FWCA was passed.[37] However, it is questionable to what extent the mitigation authority of the FWCA applies to such situations as Grasslands. The 1958 FWCA Act was generally intended to apply to projects which "have never been investigated from the standpoint of their effects on fish and wildlife resources." S. Rep. No. 1981 at 4. Further, the FWCA authorized fish and wildlife measures "before and during" construction of federal water projects. Id. at 1. In the Grasslands situation, previous and extensive measures on behalf of fish and wildlife had been authorized by Congress at the time the 1958 FWCA was considered. Congress authorized those specific measures to correct previously unmitigated CVP damage to fish and wildlife. Thus, the Grasslands situation, in which Congress directed specific measures in accord with existing 1946 Coordination Act authority, was unlike the situations contemplated by Congress when enacting the FWCA Act.

The 1958 FWCA authorized agencies to provide mitigation and enhancement benefits at the time the project was planned, or to modify uncompleted projects which had not received fish and wildlife mitigation consideration under prior law. The CVP had received previous fish and wildlife consideration under the specific Grasslands statute. Therefore, at least as to Grasslands, this part of the CVP was not one of the unmitigated, uncompleted projects for which Congress authorized post authorization modifications. On that basis, it is highly doubtful that Congress intended the FWCA to provide the type of authority needed to justify additional *mitigation* measures at Grasslands.

Thus, the pre-1954 version of the FWCA had, by Congress' own admission, questionable application to the CVP, and the FWCA has questionable application to pre-1958 mitigation projects such as Grasslands, for which Congress had authorized specific mitigation measures. Therefore, the FWCA, as amended, has questionable application to the current issue of providing water in addition to that recommended by the 1950 Grasslands Report—at least with respect to providing that additional water for mitigation purposes. This is particularly true when more CVP water would need to be allocated to the detriment of other water users which Congress in the 1954 CVP Act expressly placed on a priority over fish and wildlife uses except as specifically contemplated in the 1950 Report.

Although further mitigation measures, including additional water deliveries, may be precluded by the specific actions of Congress in 1954, CVP water deliveries in excess of the amounts recommended in the 1950 Report may still be authorized. The FWCA may be read in conjunction with Section 1 of the 1954 CVP Act as authorizing the discretionary delivery of additional CVP water on the condition that it be classified as for enhancement purposes. The FWCA, quoted above, authorized the modification of uncompleted projects for enhancement purposes as well as for mitigation. 16 U.S.C. § 662(c) (1982). The Senate report on the 1958 FWCA suggests that one of the deficiencies in the old law that the 1958 amendments were intended to correct was that: "it contains no clear authority to permit the planning of installations of appropriate means and measures to take advantage of opportunities provided by water projects for enhancement or improvement for fish and wildlife resources." S. Rep. No. 1981, 85th Cong., 2d Sess. 4 (1958).

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[37] Section 2g of the FWCA reiterates the limits of the authority to provide mitigation measures under its authority:

> The provisions of this section shall be applicable with respect to any project for the control or use of water as prescribed herein, or any unit of such project authorized before or after the date of enactment of the Fish and Wildlife Coordination Act for planning or construction, but shall not be applicable to any project or unit thereof authorized before the date of enactment of the Fish and Wildlife Coordination Act if the construction of the particular project or unit thereof *has* been substantially completed. A project or unit thereof shall be considered to be substantially completed when sixty percent or more of the estimated construction cost has been obligated for expenditure.

16 U.S.C. § 662(g) (1982) (emphasis added).

Since the 1954 CVP Act was enacted principally for mitigation purposes, and since the 1958 FWCA provided new authority to the Secretary to modify for enhancement purposes the operation of projects not substantially completed prior to its enactment, the FWCA may apply to the present situation in Grasslands. However, the financial responsibility for enhancement measures shifts to a large extent from the project itself to state and local entities. With respect to this question, the FWCA, quoted above, provides that the cost of modifications for enhancement purposes may be allocated with a finding as to the part of the cost to be reimbursed by non-federal interests. 16 U.S.C. § 662(c) (1982). Thus, water delivered in excess of the recommendations of the 1950 Grasslands Report, necessarily classified for enhancement purposes, may be sold to the receiving or requesting entities.

7. Summary of Current Contractual Provisions with Water Users Receiving CVP Water in the Grasslands Area

There are several different types of contracts and agreements that define obligations of the various federal, State and private entities in the Grasslands area of California. These contracts can generally be divided into the following categories: (1) general water service contracts between the Bureau of Reclamation (Bureau) and irrigation districts; (2) water service contracts and cooperative agreements between the Bureau and the GWD; (3) contracts between the United States and the State of California for water service to the Mendota Wildlife Management Area; (4) contracts between GWD and the Fish and Wildlife Service (FWS), and (5) contracts and agreements between GWD, the irrigation districts, and other non-federal entities.

(a) General Water Service Contracts.—Listed below are the water service contracts between the United States and the irrigation districts that provide drainage water to the Grasslands area of the CVP.

Water district and year entered—Broadview, 1959; Broadview, 1964; Eagle Field, 1959; Mercy Springs, 1967; Pacheco, 1977; Panoche, 1974; San Luis, 1959; San Luis, 1974.

All of the contracts are similar and contain a standard provision that the United States reserves the right to all waste water, seepage, and return-flow derived from water furnished to the districts and which escapes or is discharged beyond the districts boundaries.

Regarding drainage, the districts agreed to construct, "if and when needed," drainage works for the lands within the districts' service area to protect the productivity of such lands.

The 1974 contracts with Panoche and San Luis Water Districts provided for drainage into the San Luis Drain in addition to the provisions making drainage the districts' responsibility.

Except for a contract with the California Central Irrigation District, first entered in 1956 and amended in 1967, in which the United States agreed that water quality would be the best the United States could deliver through the Delta-Mendota Canal, the United States does not warrant the quality of the water delivered to any of the districts. The United States is not responsible for either the quantity or quality of any drainage water that leaves the districts.

Other than temporary discontinuance of delivery for maintenance of the waterway, etc., it appears that default on payments due is the only condition under which the United States can refuse to deliver water (assuming there is no drought and water is available).

(b) Contracts and Agreements with Grassland Water District.—There have been a series of contracts and cooperative agreements between the United States and the GWD defining the responsibilities of the parties. These contractual arrangements are as follows.

1. Contract No. 14-06-200-6106 between the United States and GWD was entered into on September 13, 1956, under the authority of an Act of Congress, approved August 27, 1954, entitled "An Act to authorize works for development and furnishing of water supplies for waterfowl management, Central Valley Project, California, and other purposes." Pub. L. No. 83-674, 16 U.S.C. §§ 695d-695j-1 (1982).

The purpose of the contract was to provide for the "delivery of water within the District's boundaries for waterfowl purposes in the Grasslands area of the San Joaquin Valley, and to seek the dismissal of the case of *Hollister Land & Cattle Company* v. *Julius A. Kruz.*" (The complaint was a prayer for an injunction restraining officials of the Department and the Bureau of Reclamation from diverting the natural flow of the San Joaquin River, or in the alternative, for a physical solution or for damages for inverse condemnation.)

Under the Contract, the United States agreed to provide 50,000 acre-feet of water per year, "if and when available" from the Delta Mendota Canal, with deliveries limited to between September 15 and November 30, inclusive. Article 4(a). In critically dry hydrologic years, the obligation was not to exceed 25,000 acre-feet. Article 4(e) and (f)

Under article 4(h), the United States could temporarily discontinue delivery, or reduce the quantity of water delivered for purposes of inspection, maintenance of facilities, repair, etc. Article 5 gave the Secretary sole power and discretion to determine "if and when water is and shall be available for delivery. . . ."

GWD agreed to pay for the water at the rate of $1.50 per acre-foot for a period of 40 years from the date of the contract. Article 7 at 8. Water delivered to "public agencies or organizations" pursuant to Section 6 of the 1954 CVP Act was reimbursable. 1954 CVP Act, Pub. L. No. 83-674, § 6 68 Stat. 879 (1954).

Article 16 provided that the United States could refuse to furnish water during any period in which GWD was in default on payment of charges under the contract. The article further provided that the District would not furnish water to lands or portions that are in default on charges levied by the District. Article 16 at 12.

2. The second major contract with GWD was Contract No. 14-06-200-4658A, dated December 27, 1969, and entitled "Cooperative Agreement and Habitat Management Plan." This Agreement was entered between the United States (Bureau of Reclamation and Bureau of Sport Fisheries and Wildlife) and GWD, under the authority of the 1954 CVP Act, *supra*. Its provisions somewhat modified, and were supplementary to, the 1956 contract.

By the 1969 Cooperative Agreement, GWD agreed to (1) maintain wildlife and waterfowl habitat consistent with past management of GWD and (2) maintain water in quantities sufficient for the maintenance of waterfowl habitat on 25% of GWD area by using summer drain water from various sources. Articles 1 and 2.

GWD also agreed to furnish the United States, free of charge, 3,500 acre-feet of winter water and 4,000 acre-feet of summer waste water (when available) for use on Kesterson Reservoir lands. Article 10. In addition, the GWD agreed to maintain that portion of Los Banos Creek Channel which was located within the GWD to accommodate drainage flows attributable to the San Luis Holding Reservoir. Article 11. The GWD further agreed to comply with all federal and California laws and regulations concerning pollution of streams, etc. Article 17 at 4.

The Bureau of Reclamation agreed, in return for the new obligations accepted by GWD, to furnish GWD 50,000 acre-feet of water at $.10/acre foot provided that 50% of the lands in GWD were restricted to wildlife habitat. The agreement provided that the entire 50,000 acre-feet of water would be provided at $.10/acre-foot if 80% or more of the GWD lands were covered by a covenant of restrictive use. If less than 80% of the lands were covered by covenant, the water would be provided at $.10/acre-foot in direct proportion to 50,000 that the land under covenant bore to the total acreage of the District. Article 5 at 2.

The Bureau also agreed to furnish GWD, free of charge, all the San Luis Reservoir surplus drainage water the District requested. Article 11 at 3.

3. On December 6, 1980, Contract No. 14-06-200-4658A Amendatory, entitled "Cooperative Agreement and Habitat Management Plan," was entered. This amendment to the 1969 Cooperative Agreement implemented the 1978 Amendments to the 1954 CVP Act. The two principal changes were the elimination of all charges for water service and the priority of water for wildlife and waterfowl habitat use during critical water years. (This latter provision was accomplished by amending the agreement to call the water "irrigation water", thus giving it priority with other CVP users in time of shortage.)

The Bureau agreed to furnish GWD 50,000 acre-feet of water/year, free of charge, (on a nonreimbursable basis) provided that GWD: (1) furnish to the FWS 3,500 acre-feet of water between October 1 and November 30, and 4,000 acre-feet between May 1 and September 30, and (2) construct, operate and maintain any distribution facilities, etc., necessary to deliver the above-mentioned water to the Service.

In short water years, water for habitat use is to be given equal priority with agricultural water users.

4. The United States and GWD entered Contract No. 14-06-200-3447A on August 4, 1967, under the authority of the Reclamation Act of June 17, 1902, and particularly

the Act of August 4, 1939. The water comes from the Delta-Mendota Canal or the San Luis Canal.

Under this contract, the United States agreed to provide 3,500 acre-feet of water free of charge to GWD as a settlement of all claims GWD might have against the United States because of the appropriation and storage of flows of Los Banos Creek and San Luis Creek pursuant to the construction of joint-use facilities of the San Luis Unit.

(c) Contracts Between the United States and the State of California.—1. On April 3, 1969, the United States and the State of California entered Contract No. 14-06-200-4359A for the purpose of providing water service from the CVP to the Mendota Waterfowl Management Area (MWMA). The authority to enter the contract was under the 1954 CVP Act, discussed above.

With this contract, the United States agreed to furnish 12,000 acre-feet of Section 6 water from Mendota Pool at the rate of $1.50/acre foot. The United States also reserved the right to all waste, seepage, and return flow, (article 6(d) at 12) and can temporarily discontinue delivery of water in order to maintain, repair, or replace facilities. Article 6(c) at 13. Further, the United States does not warrant the quality of the water. Article 12 at 16.

California agreed to run the water only for waterfowl purposes, article 8 at 14, to improve the MWMA through construction of levees, etc., and to control the growth of undesirable plants, article 6(c) at 11. The State also agreed to abide by all applicable State and federal reclamation laws, etc. Article 13 at 16. If California should increase the size of the Waterfowl Management Area, the United States is under no obligation to deliver any additional water. Article 15 at 12. The United States also is under no obligation to furnish Schedule 6 water if California should default on its payments. Article 16 at 17.

2. Contract No. 14-06-200-3342A is entitled "Memorandum of Agreement for the Preservation of Fish and Wildlife Resources of the Wetlands." This memorandum was entered between the Bureau and the California Department of Fish and Game, June 14, 1967.

Under the provisions of this Agreement, the Bureau agreed to deliver 4,000 acre-feet of water, free of charge, to the California Department of Fish and Game, for waterfowl marsh management purposes only. The water can be used within Merced County on any State or Federally-operated wildlife management area.

Under article 6, at 4, the United States may temporarily discontinue the flow of water for the purpose of inspection, maintenance, and repair, etc. The agreement also contains the provision that the Secretary or his authorized representative has the sole right to determine if and when water is and shall be available for delivery under this agreement. Article 7 at 4.

8. Applicability of the Reclamation Reform Act

The question has been raised as to whether the Reclamation Reform Act of 1982 (RRA), *supra*, would apply to the agreements between the United States and GWD. The provisions of the RRA apply to users of federally developed "irrigation" water. "Irrigation water" is defined by the Act as "water made available for agricultural purposes. . . ." 43 U.S.C. § 390bb(5) (1982). There are no references to water that's to be used for wildlife habitat maintenance.

Furthermore, the definitions of the words "contract" and "district" (the only authorized contracting entities) preclude the arrangement with the GWD from coming under the RRA. A "contract" under the RRA provides for the "payment of construction charges to the United States including normal operation, maintenance, and replacement costs pursuant to Federal reclamation law." 43 U.S.C. § 390bb(1) (1982). In the amended GWD agreement, the payment provisions were eliminated. "District" is defined by the RRA as any individual or any legal entity which has entered into a contract for irrigation water. 43 U.S.C. § 390bb(2) (1982). The GWD contract is for the maintenance of wildlife habitat, not irrigation.

In a memorandum to the Secretary recommending execution of the 1956 contract with GWD, the Commissioner of Reclamation explained that "[i]nasmuch as the water service provided by the contract is for waterfowl purposes pursuant to the Act of August 27, 1954, excess land provisions have not been included." Memorandum from the Commissioner to the Secretary at 5 (April 27, 1956) (discussing the proposed water service contract between the United States and the GWD). This language, and the fact that the excess land provisions have not been included with any of the subsequent amendments, support the view that the GWD contract is unique and not subject to the provisions of general reclamation law.

The fact that the water provided to GWD is to be used for wildlife and waterfowl management purposes, and the excess land provisions, typical to most water service contracts, were specifically not included, further support the conclusion that this contract does not fall under the RRA.

[Memorandum]

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SOLICITOR,
Washington, DC, October 1, 1985.

To: Assistant Secretary, Fish, Wildlife and Parks; Assistant Secretary, Water and Science
From: Marian Blank Horn, Principal Deputy Solicitor
Subject: Departmental responsibilities and authorities respecting the Grasslands area in California

Your offices have raised several questions of a legal nature concerning water supplies for waterfowl habitat in the Grasslands area. We have done extensive research on the issues presented and have examined pertinent statutes, treaties and contracts. Our conclusions are summarized in the attached memorandum.

[Attachment.]

SUMMARY CONCLUSIONS

Question 1. What are the legal obligations, if any, of the Department to maintain areas as wetlands within Grasslands?

a. On a short term basis

Answer. Treaties. The Migratory bird treaties with Japan and the Soviet Union, which provide for migratory bird habitat protection, are not self-executing; they must be implemented by domestic legislation, like the Migratory Bird Treaty Act. The treaties by themselves thus impose no binding or legally enforceable obligation on the Secretary to maintain wetland habitat.

Migratory Bird Treaty Act, 16 U.S.C. § 101 et seq. The MBTA regulates the taking and commercialization of migratory birds, but does not bind the Secretary to maintain wetlands as migratory bird habitat.

Section 3(h)(3) of the Fish and Wildlife Improvement Act of 1978, 16 U.S.C. § 712(2). This provision is a general authorization for the Secretary to issue regulations implementing the provisions of the various migratory bird treaties. Congress has not, however, provided the Secretary with any guidance as to its intentions for implementation of the habitat protection provisions of the Japanese and Soviet Treaties.

National Wildlife Refuge System Administration Act, 16 U.S.C. § 668dd et seq. The San Luis Refuge was established as part of the National Wildlife Refuge System in order to protect and perpetuate its migratory bird resources. The easement interests of the Fish and Wildlife Service (Service) were subsequently added thereto and are now also a part of the System. The Refuge System Act therefore generally requires that these areas be managed to serve these purposes. Over the short term, the Secretary has authority to cut off water to these wetlands so long as that action would further the conservation of the birds.

Endangered Species Act of 1973, 16 U.S.C. § 1531 et seq. The endangered Aleutian Canada Goose inhabits two duck clubs in West Grasslands during the winter, one of which is subject to a Service easement. Only a remote chance exists that maintenance of this particular wetland area is important to the survival of the species. Should this conclusion prove to be inaccurate, however, due to an unexpected and biologically significant decline in the population or range of the species, the Secretary would have to consider his various responsibilities under the Endangered Species Act (ESA) in deciding what course of action would be appropriate under the circumstances.

1954 Central Valley Project Reauthorization (including 1918 amendment). The Central Valley Project (CVP) reauthorization, Act of August 27, 1954, 43 U.S.C. 695d (1982) (1954 Act), imposes no legal obligation to maintain any areas within Grasslands as wetlands.

Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et seq. This act imposes no legal obligation to maintain wetlands.

Migratory Bird Conservation Act, 16 U.S.C. § 715 et seq. This act imposes no legal obligation to maintain wetlands.

Executive Order 11190, (May 24, 1977).

The wetlands executive order generally exhorts, but does not bind, the Secretary to maintain wetlands and does not create third party enforcement rights. This is particularly true where elimination of wetlands would serve the public interest, e.g. protection of fish and wildlife.

Contract. The easement agreement between owners of the easement wetlands and the United States does not obligate the Secretary to maintain the lands as wetlands.

b. On a long-term basis

Answer. The answers to Question 1(a) do not change over the long term; however, further consideration of the Secretary's authority and responsibilities under the Refuge System Act and the ESA may become necessary.

The Refuge System Act requires the Secretary to maintain Refuge System lands and interests therein for wildlife purposes in the manner that was contemplated at the time the lands or interests therein were acquired. Thus, for example, the Secretary would be precluded from exercising his administrative discretion over any part of the Refuge System in a manner which would prevent it from serving the purpose for which it was acquired. If circumstances beyond the Secretary's discretion and control prevent him from managing the lands as originally contemplated, thereby eliminating their value as wildlife habitat, the Secretary should advise Congress of the changed circumstances precluding his effective management of the lands or interests therein. Congress could then act to remove the lands from the System if it so chose. Such a circumstance can arise if the water supply anticipated for the management of particular Refuge System lands or interests therein becomes polluted. Should such a pollution problem become chronic and not be resolved in the short term, then the Secretary would have to review what remedial actions, if any, he would be required to take under the Refuge System Act, CVP legislation and other federal law. As for the ESA, a similar review should take place if the pollution of Aleutian Canada Goose habitat becomes a long term problem.

Question 2. What are the rights and obligations of the Fish and specifically Wildlife Service respecting use of drainage water?

a. Respecting diversions from Salt Slough

Answer. Two licenses granted by the California State Water Resources Control Board (SWRCB) are applicable. While there is possible risk of abandonment or forfeiture under state law of some or all of the water authorized to be appropriated by the licenses, actual diversions pursuant to the licenses are discretionary.

b. Respecting the provision of drainage for the Grassland Water District

Answer. The Grassland Water District (GWD), as opposed to the Department, has legal responsibility for "the control, carriage, handling, use, disposal, or distribution of water" supplied by the United States.

c. Respecting the receipt of water from Grassland Water District

Answer. The Service has a contract with GWD for delivery of water to the federal refuges. The Secretary is empowered to refuse delivery of water on any basis, and such refusal would not subject the United States to any liability to GWD or upstream draining entities. The Service has no contract with GWD for delivery of water to lands on which the Fish and Wildlife Service holds easements.

d. Respecting any continuing obligation to receive drain water

Answer. The Department has authority under a 1980 agreement with GWD to refuse to accept deliveries of drain water on federal refuge lands and possibly to preclude application of drain water on lands within the GWD. "Cooperative Agreement and Habitat Management Plan," Contract No. 14-06-200-4658A Amendatory (December 6, 1980) (1980 Agreement).

Under the 1980 Agreement, the district must comply with applicable federal and state pollution control laws. The EPA standards and criteria regarding selenium do not bear directly on the suitability of drain water for use in maintaining waterfowl habitat. The Department must rely on terms of the Agreement, or law other than the Clean Water Act, for refusing statutory delivery of drain water. These provide a sufficient legal basis for doing so, regardless of whether the selenium levels are within EPA or Clean Water Act standards.

Question 3. What is the legal liability, if any, of the Department under the ESA and the MBTA resulting from the continued use of agricultural drain water?

Answer. Although endangered Aleutian Canada Geese are present in the area, there are no known deaths of any such geese caused by the application of drain water in Grasslands. However, civil or criminal liability under sections 9 and 11 of the ESA could arise if any Aleutian Canada Goose died as a result of applying such water. Additionally, if application of the drain water by the Service were begun, and such application jeopardized the continued existence of the species (a remote possibility), a violation of section 7 would result.

The May 31, 1985, memorandum from the Solicitor to the Secretary on the Kesterson Reservoir discusses in detail the potential, if any, for application of the Migratory Bird Treaty Act to migratory bird deaths resulting from ingestion of selenium. Our conclusions on the MBTA are fully set forth in that memorandum.

Question 4. What are the legal obligations, if any, of the Department for remedial action in the Grasslands area?

Answer. It is highly unlikely that the Department is obliged, under current environmental conditions, to undertake any clean up or remedial actions under federal or state law, including CERCLA (Superfund), RCRA, the Clean Water Act, or the state Porter-Cologne Act.

Under CERCLA, if remedial actions become necessary, the Service would be responsible for federal lands, while the EPA or the state would have the lead on private lands. It is noted that the Service could be considered a "responsible party" under the Act if it applied contaminated water to these lands. If any action were required under RCRA or state law, the Service would be responsible for federal lands, while private landowners would be responsible for their own lands.

Question 5. What are the Department's obligations, if any, under the National Environmental Policy Act (NEPA) for responding to the current situation at Grasslands?

Answer. Under the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. (1982) (NEPA), the Secretary is not required to prepare NEPA analyses for actions intended to address the immediate problems presented by unanticipated emergencies. All further actions will require NEPA analysis.

Question 6. What is the authority, if any, of the Secretary to deliver water from the CVP to the Grasslands area and what is the obligation, if any, of the Secretary to obtain reimbursement for CVP water delivered for fish and wildlife purposes?

Answer. The Secretary has specific authority under sections 2 and 3 of the 1954 Act to supply a limited amount of CVP water to the refuges and waterfowl management areas owned and operated by the United States or the State of California within the Grasslands area. The cost of CVP water delivered pursuant to this authority is not reimbursable, which means that it is borne by the taxpayers at large. Privately-owned lands in which the United States has acquired an easement interest for the purpose of preserving waterfowl habitat do not qualify for CVP water service under this authority.

The amount of CVP water that the Secretary is authorized to deliver under section 2 of the 1954 Act is approximately 47,000 acre-feet annually, if and when available. The delivery of CVP water pursuant to section 2 is subject to the relative priorities of the use of CVP water for fish and wildlife under federal and state law. As a general rule under state law, the use of CVP water for fish and wildlife is subordinate to its use for domestic and irrigation purposes. The SWRCB and the Secretary, respectively, have discretion to grant permits and make allocations that differ from the general state priorities for water use.

Section 6 of the 1954 Act, as amended in 1978, also authorized the Secretary to deliver a limited quantity of CVP water to lands within the Grasslands area on a nonreimbursable basis, subject to specified conditions. The maximum quantity of CVP water so authorized to be delivered was 50,000 acre-feet, when and if available.

The Secretary has exercised his present section 6 authority by amending the pre-1978, section 6 contract with GWD to provide for the delivery of the maximum authorized quantity of CVP water on a nonreimbursable basis, subject to the restrictions adopted by Congress in 1978. These restrictions include the requirement that landowners within GWD must limit by covenant the use of their lands to provide waterfowl habitat. A review of some of the restrictive covenants executed by the landowners has raised issues as to (1) whether these covenants are in strict conformance with this requirement and (2) whether under section 6 the right to use the CVP water covered by the 1980 agreement has reverted to the Secretary.

If reversion has occurred, the Secretary could enter into a new agreement with GWD or some other qualified public organization agency to continue CVP water service to private lands within the Grasslands area. As a condition of such an agreement, the public organization or agency would be required to deliver a minimum of 3,500 acre-feet of water suitable for wildlife conservation to the Fish and Wildlife Service, if available. The Secretary could in a new agreement require the public organization or agency to deliver an even greater amount of such section 6 water to the Service. The Service could specify a delivery point or points for such water anywhere within the geographic boundaries of the public organization or agency. Thus, the Service could receive some quantity of water in addition to the amount delivered under section 2 of the 1954 Act, and could use such additional water for wildlife conservation on public or private lands, including easement lands, within the Grasslands area.

Delivery of CVP water to any areas and in any amounts not specifically authorized by the 1954 Act must be pursuant to the Secretary's general authority under the Fish and Wildlife Coordination Act to enhance fish and wildlife, or pursuant to his authority under section 9(c) of the Reclamation Act of 1939. The cost of any delivery of CVP water pursuant to these authorities must be paid by the water recipient. Under current Department policy, the rate charged for such delivery of CVP water would be the rate charged for CVP water delivered for irrigation purposes.

Department of the Interior,
Office of the Secretary,
Washington, DC, July 16, 1991.

Hon. Conrad Burns,
Subcommittee on Water and Power, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

Dear Senator Burns: Enclosed are responses to the questions in your letter of May 10 addressed to Michael Brennan concerning S. 484, the Central Valley Project Improvement Act. If you need further information, please contact me.

Sincerely,

Pamela E. Somers,
Legislative Counsel.

[Enclosure.]

Question 1. How would you differentiate between mitigation and enhancement actions to be taken under this bill?

Answer. In general, the Service considers "mitigation" to include actions to avoid or offset the impacts of a specific project on a resource. "Enhancement" is an incremental improvement of a resource above and beyond levels that would exist in the absence of a project (i.e., an increase in a resource in excess of that required for mitigation).

Analyses of mitigation needs and enhancement opportunities are generally conducted prior to a project's construction and are based on detailed studies of habitats or populations (or both) that might be affected by a project. However, the Fish and Wildlife resource impacts of the entire Central Valley Project have never been adequately quantified. The impacts of some project units were never studied at all. The impacts include construction impacts, operational impacts, service area impacts, and impacts at points of diversion and return flow. In addition, baseline conditions (i.e., the levels of resources that existed prior to construction of the many project features and the levels that would have existed in the absence of the project) were never accurately defined.

Quantification of the baseline and assessment of impacts now, 50 years after project construction began, will be difficult. Nevertheless, reasonable estimates can be made to differentiate between mitigation and enhancement. We are beginning work with the Bureau of Reclamation now on just such an assessment. We expect no difficulty in making reasonable distinctions as the need arises.

The term "enhancement" is used once in the legislation, in section 5(a). In the context in which it is used, it appears unnecessary to differentiate between mitigation and enhancement. As used, it appears to refer to improvement over current conditions, not improvement over conditions as they would have existed in the absence of a project.

The term "enhance" appears in three places in the legislation. In section 6(a)(1) and section 6(c)(1), it is used in the context in which it may be appropriate to differentiate between "enhance" and "restore" (mitigate). In section 7(g)(7), it is used in a context in which there appears to be no need to differentiate between "enhance" and "mitigate".

The term "mitigate" appears only once in the legislation, in section 6(c)(1). As it is used there, it may be appropriate to differentiate between mitigation and enhancement.

Question 2. Is it fair for today's customers of the CVP to pay the entire amount for the resolution of problems caused by other water projects or people from other generations?

Answer. We believe the Central Valley Project customers should be responsible for the resolution of problems caused by the Central Valley Project. We would make no distinction between "today's customers" and "people from other generations" because today's customers are the beneficiaries of the facilities built by people from other generations. With the benefits go the responsibility.

Question 3. What would be the impact on the operations of the CVP if the delta smelt was listed as endangered?

Answer. The delta smelt population has exhibited an 87 percent decline in numbers since 1983, and its population has remained at alarmingly low levels during the present 5-year California drought. If not for an unusually wet March, the population not only of delta smelt but also most other fish and wildlife would be suffering more severely during 1991 because more critical water shortages would have occurred.

If the delta smelt is federally listed as endangered, it could have an impact on CVP operations. The magnitude and duration of those impacts would depend on the water conditions and the recovery of the delta smelt population. At this time, we have no quantitative data on the magnitude and frequency of impacts to CVP operations.

Historically the CVP has been operated to meet contractual obligations for deliveries as well as the other authorized project purposes. Continuing such operations, especially during the wintertime, reduces the Sacramento-San Joaquin River Delta outflow, perhaps at times critical to the maintenance of delta smelt spawning, nursery, or rearing habitats. At times, the CVP probably would have to implement measures and/or operations to protect the aquatic habitat for the federally listed, threatened, winter-run chinook salmon. The likely best-case scenario is that the CVP would have to modify operations to continue to meet its objectives. A worst-case scenario is that the CVP may have to diminish water deliveries.

Question 4. What would be the impact on this legislation (S. 484), if passed, if the smelt was listed as endangered?

Answer. There would be no impact on the provisions of S. 484 if the delta smelt is listed. The quality of aquatic habitat required by this smelt species would likely assist in the improvement and justification for the maintenance of Sacramento-San Joaquin River Delta water quality. The aquatic habitat requirements and the seasonal freshwater instream flow requirements of the delta smelt and the federally listed winter-run chinook salmon probably would not conflict with each other. These species would define the starting level, or amount, of fish and wildlife restoration S. 484 would require from the CVP.

Question 5. You state that you support the Fund and Trust. Does the Administration support making funds available without appropriation?

Answer. We note initially that the Justice Department has identified a constitutional problem with the Trust, as explained in a letter that justice will supply to the Water and Power Subcommittee shortly. Assuming, however, that this problem can be remedied, the Administration does not have a problem with the funding mechanism in the bill.

Question 5a. Should there be any audit or accounting for expenditures by the Trust?

Answer. Yes.

Question 5b. Why do we need to create a separate Trust?

Answer. Presumably, a Trust is intended to provide a measure of local control over funds paid by Californians. Assuming that the constitutional problems can be overcome, this would be consistent with the Administration's policies.

Question 5c. The Fund, in part, is to "provide jobs and sustainable economic development. Don't we already have Federal and local programs to do that? Why should we place a surcharge on the CVP so that the Fish and Wildlife Service can fund economic development?

Answer. Yes, other Federal, State, and local programs do have as their objectives the provision of jobs and economic development. We do not read this as a surcharge to fund economic development but rather as direction to the Secretary to use the Fund in a way that would achieve these goals. We believe this is intended to offset the impacts of changing the way the Federal government manages the water.

Question 5d. The Fund also provides for expanded recreational opportunities, although not limited to the Central Valley. Is the Fish and Wildlife Service the principal recreation agency in the Department? Why should CVP users fund recreation?

Answer. The Fish and Wildlife Service is not the principal recreation agency in the Department although we do provide recreational opportunities at many National Wildlife Refuges and other facilities. In addition, the results of many of our programs provide fish and wildlife related recreational activities. It would be appropriate for CVP users to help fund recreation to the extent that the project impacted recreational opportunities, to the extent that fish and wildlife mitigation, restoration, and enhancement provide ancillary recreational opportunities, and to the extent that CVP users choose to fund recreational opportunities.

Question 6. The legislation has been described as setting a cap of $30 million on CVP users' liability for mitigation. Is there a cap in this legislation? Should the Endangered Species, Fish and Wildlife Coordination Act, and other statutes be waived? Assuming the CVP users remain liable for mitigation and requirements of the Endangered Species Act, would you support directing the proceeds of the surcharge for enhancement, recreation, and other activities rather than mitigation in order to obtain maximum benefits?

Answer. The Service reads the legislation to require a surcharge on all project power and project water sales that will provide $30 million annually to implement the restoration goals of the Act. We see no reference in the bill to a cap on mitigation liability, nor do we see any basis for waiving any pertinent statute, particularly the Endangered Species Act or the Fish and Wildlife Coordination Act. Our position is that the CVP users should be responsible for the problems caused by the project.

Question 7. Isn't it true that almost all of the wetlands lost in the Central Valley were lost prior to the construction of the CVP?

Answer. It is estimated that 4 to 4.5 million acres of wetlands and shallow freshwater lakes originally existed in the Central Valley. The majority of losses took place during the early part of the century. Prior to construction of the CVP most of these had already been lost due, in large part, to conversion to agricultural and urban land use and various flood control measures. We estimate that about 548,000 acres of wetlands existed when construction of the Central Valley Project began. There are now about 278,000 acres of wetlands. The post-construction loss of 270,000 acres has not been attributed to any specific cause, although land use changes induced by the CVP undoubtedly accounted for some of it.

Question 8. Is the $30 million annual restoration fund adequate to accomplish the restoration and enhancement of the Central Valley environment?

Answer. Until an analysis is completed, it is impossible to say with any certainty, but we surely would expect to accomplish a lot with that amount.

Question 9. How does the Fish and Wildlife Service define the words "fair and equitable treatment" in the context of operation the CVP?

Answer. We do not find the words "fair and equitable treatment" in the bill. However, for a project proposed to be constructed, the Fish and Wildlife Coordination Act requires consideration for fish and wildlife resources "equal" to other project purposes.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, DC, July 16, 1991.

Hon. CONRAD BURNS,
Subcommittee on Water and Power, Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

DEAR SENATOR BURNS: Enclosed are responses to the questions in your letter of May 10 addressed to Patrick Hayes concerning S. 484, the Central Valley Project Improvement Act. If you need further information, please contact me.

Sincerely,

PAMELA E. SOMERS,
Legislative Counsel.

[Enclosure.]

Question 1. How long would it take to "investigate and report on all effects of the CVP on anadromous fish populations and the fisheries, communities, tribes, businesses and other interests and entities that have now or in the past had significant economic, social or cultural association with those fishery resources"?

Answer. Preparation of such a report would be the responsibility of the Secretary of Commerce pursuant to Section 6(d) of S. 484. We estimate, however, that it would take approximately 3 years from the date initial funding is available for the Bureau of Indian Affairs, U.S. Fish and Wildlife Service, and the Bureau of Reclamation, working in consultation with other Federal agencies as well as State, local, and tribal entities, to analyze existing data, obtain necessary supplementary information, and to report on all effects of the CVP on anadromous fish populations and the fisheries, communities, tribes, and other entities.

Question 2. Would a citizen suit to force increased water deliveries from the Trinity River to the Central Valley refuges be in the best interests of the Hoopa and Yurok Tribes?

Answer. We believe a citizen suit to force increased water deliveries from the Trinity River to the Central Valley refuges would not be helpful to the Department due to the uncertainties and possible loss of discretion entailed by extended litigation. Since the tribes have an earlier priority date than other users of Trinity River water however, such a suit would likely result in a quantification of their water rights and quantified water rights are easier to enforce.

Question 3. Do you view your trust responsibility as the minimum necessary or more than that?

Answer. Yes, we do view the United States trust responsibility to Indian tribes as the minimum necessary.

Question 4. Assuming your responsibility is more than the legal minimum, what would be the effect on your ability to meet other trust and legal responsibilities if litigation were initiated under the Endangered Species Act to use Trinity River water to benefit Delta Smelt?

Answer. Such litigation might help define the relationship between the Endangered Species Act (ESA) and the water rights of the Hoopa Valley Tribe. However, it might constrain the Department's flexibility in allocating water to meet competing demands.

Question 5. What is more important, the Endangered Species Act or your Trust Responsibility?

Answer. The obligations of the Interior Department under the trust responsibility and the Endangered Species Act are both imposed on the Department by Federal Jaw. The Department is required to meet both those obligations.

Question 6. In the case of irreconcilable conflicts between the delta's water needs for endangered species and the Trinity River water flows for the Hoopa and Yurok, which should control?

Answer. How such conflicts would be resolved under existing law or should be resolved as a matter of policy would be influenced to a large degree by the specific facts of the situation. At present, no such conflict has occurred. Speculation as to future fact situations would not be useful due to the opportunities to resolve Endangered Species Act issues through sections 7 and 10 of the Act.

Question 7. Did the same analysis apply to the construction and operation of the Animas-La Plata Project for the Colorado Utes?

Answer. There has not been a determination of irreconcilable conflict between the Endangered species Act and the trust responsibility in the context of the Animas-La Plata Project. The Department is still working to fulfill both of these obligations. The Animas-La Plata Project is an example of a cooperative approach under Section 7 of the ESA to attempt resolution of ESA issues.

Question 8. Would the Bureau of Indian Affairs support the construction of additional storage within the Central Valley for wetlands or other uses if an incidental result would be to decrease demands on the Trinity?

Answer: We would prefer to reduce demand on the Trinity River through better management of existing water supplies within the Central Valley.

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
Washington, DC, July 16, 1991.

Hon. CONRAD BURNS,
U.S. Senate, Washington, DC.

DEAR SENATOR BURNS: Your letter of May 10, 1991, transmitted a list of questions concerning testimony offered on behalf of the Administration at the Water and Power Subcommittee hearing on S. 484, held on May 8, 1991. We offer the following responses to those questions and trust that your needs will be met. For your convenience we are repeating the questions.

If we can be of further assistance in this matter or provide more specific information, please feel free to contact this office at anytime.

Sincerely,

DENNIS B. UNDERWOOD,
Commissioner.

[Enclosure.]

Question 1. How many years do you expect it will take to undertake the programmatic EIS for contract renewals?

Answer. It is difficult to provide an accurate answer to this question because the scope and complexity of any given environmental impact statement (EIS) is unknown until sometime into the study. A minimum realistic timeframe for an EIS given a high budget priority is generally about 18 months for preparation, processing, review, and finalization. However, where an EIS is involved in some of our current contract renewal environmental evaluations, we are anticipating a 2-3 year effort. Section 4(d) of the bill appears to require that the impacts of potential contract renewals be compiled in one document. Such an effort would probably exceed this estimate. The estimated time does not include any time involved in litigation.

Question 2. How would elimination of diversions from the Trinity impact your ability to operate the Project for the protection of the threatened winter-run salmon on the Sacramento River?

Answer. Without corresponding operational changes or water conservation in the remainder of the system, the elimination of these diversions could certainly impact our ability to operate the CVP for the winter-run Chinook salmon and other runs of salmon in the upper Sacramento River.

Provision 3. Section 4(b) authorizes you to auction 100,000 acre feet under not greater than 20-year contracts to the highest bidder.

Question a. Given your experience, do you think that any municipality can adequately plan with a 20-year contract?

Answer. Regardless of the purpose of use, whether instream or consumptive use, a dependable water supply is what is required to preserve a use. We believe it is unlikely that prudent urban planners would agree to rely on a 20-year water supply to meet growth requirements within their jurisdiction. However, there may be circumstances under which local municipal officials may be placed into bidding for the supply, hoping that a new supply will be developed in the interim.

Question b. Do you own 100,000 acre-feet of water, or do you hold rights to water under state law for current project purposes?

Answer. The United States has the water rights to deliver 100,000 acre-feet of water to a user within our place of use for authorized project purposes.

Question c. Do those rights include limitations on purpose of use, place of use and county of origin protection?

Answer. Yes. If a user outside our place of use wanted to purchase water, it would not be consistent with our current permits.

Question d. In order to maximize the profit from the 100,000 acre feet, would you need to go beyond the authorized service area of the CVP?

Answer. The most logical high bidders for the 100,000 acre-feet are located in southern California metropolitan areas. If that is in fact the case, it would probably be necessary to expand the authorized service area and place of use under our water rights permits.

Question e. Would this effectively require a condemnation of state water rights, and do you have any estimate of what the cost might be?

Answer. We assume that the water for the proposed auction would be from the CVP uncommitted yield; therefore, a condemnation of State water rights would not be necessary. With State approval of the transaction, arrangements for the deliveries could proceed through the NEPA compliance and the State permitting processes. Considering the several unknown variables, it is not considered practicable to make a "cost estimate" at this point.

Question f. Isn't it true that no water from the Colorado may be delivered into the Lower Basin other than by contract with the Secretary of the Interior? How much money would the federal government derive if it auctioned off the total Lower Basin entitlement to the highest bidder?

Answer. Delivery of water into the Lower Basin is accomplished pursuant to the terms of the interstate Colorado River Compact of 1922 (Compact) as approved by the Congress in the Boulder Canyon Project Act of 1928 (Act). Section 5 of the Act stipulates that no person shall have or be entitled to have the use for any purpose of the water stored in the reservoir created by the Hoover Dam except by contract with the Secretary of the Interior (Secretary). Additionally, Article II(B)(5) of the Supreme Court Decree in *Arizona* v. *California et al.*, provides that ". . . mainstream water shall be released or delivered to water users (including but not limited to, public and municipal corporations and other public agencies) in Arizona, California, and Nevada only pursuant to valid contracts therefore made with such users by the Secretary of the Interior. . . ." All of the Lower Basin's 7.5 million acre-foot consumptive use supply has been apportioned to the states of Arizona (2.8 million acre-feet) California (4.4 million acre-feet) and Nevada (300,000 acre-feet). Except for minor amounts of water available under Arizona's and Nevada's apportionments, the Secretary has entered into water service contracts for all water available under the apportionments to the Lower Basin States.

The delivery of water into the Lower Basin is under the control of the Secretary in his capacity as watermaster of the Lower Colorado River, and such deliveries are regulated by the Compact, the Act, the Decree, and the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs. It is our view that the United States is precluded from auctioning the Lower Basin water supply to the highest bidder due to existing contractual agreements as well as the above referenced Compact Act and Decree.

Question 4. There seems to be some confusion as to the necessity of authorizing fish and wildlife as a project purpose for the Central Valley Project. Under current law, can the facilities of the CVP be used to satisfy fish and wildlife needs?

Answer. Under current law, the facilities of the CVP can be used for fish and wildlife purposes. The Act of August 27, 1954, specifically states:

> The entire Central Valley project, California, heretofore authorized under the Act of August 26, 1937 (50 Stat. 844), and reauthorized under the Act of October 17, 1940 (54 Stat. 1198), the Act of October 14, 1949 (63 Stat. 852) and the Act of September 26, 1950 (64 Stat. 1036), is hereby reauthorized and declared to be for the purposes set forth in said Acts, and also for the use of the waters thereof for fish and wildlife purposes, subject to such priorities as are applicable under said Acts. (68 Stat. 879; 16 U.S.C. 695d).

Thus, the 1951 Act added fish and wildlife as specific authorized project purposes.

Question 5. Section 104 of P.L. 99-546 restricted contracting for the delivery of water from the CVP until one year after transmittal to the Congress of a feasibility report on "Refuge Water Supply Investigations, Central Valley Basin, California." What is the status of that study?

(Note: It should be pointed out that the requirement of the legislation is that the Secretary of the Interior shall not contract for the delivery of more than 75 percent of the firm annual yield not currently committed under long term contracts until one year after the report is submitted to the Congress.

Answer. An initial report was prepared in March 1989, which identified water needs and presented several water delivery alternative plans for ten National Wildlife Areas, four State Wildlife Management Areas, and one private wetland in the Central Valley (refuges). An ongoing analysis of promising alternatives, expected to be completed by the end of fiscal year 1992, will further identify and evaluate all available surface water resource opportunities. These studies will also identify groundwater development opportunities to determine the potential for conjunctive use on the refuges. The most promising alternatives are expected to be analyzed at the feasibility level. In the event that a feasible project can be recommended, Reclamation may be expected to pursue construction appropriations during Fiscal Year 1993.

Question a. Is that the same study as referenced in section 3(d) of S. 484?

Answer. Yes.

Question b. Why was this study not transmitted to the Congress?

Answer. There was the need to link the environmental compliance documentation with the preparation of an overall water allocation strategy for the uncommitted water supply of the CVP, and since the report was only an initial identification of the water supply related problems and opportunities on the refuges, it was not submitted to the Congress. Therefore, after our present analysis is completed, and promising alternatives are identified, Reclamation intends to pursue a feasibility-level investigation with appropriate environmental compliance documentation.

Question 6. Section 6(b) of S. 484 requires that—immediately upon enactment—water be delivered to various wildlife areas in accordance with the Refuge Water Supply Report. Is this physically possible? Would this interfere with other contractual obligations of the CVP?

Answer. Currently, it is not physically possible to deliver water to all the refuges in the amounts and at the times identified in the Refuge Water Supply Report. Several refuges would need conveyance systems to deliver water to the refuge, as well as on refuge systems to distribute the water. The immediate delivery of Level 2 water (average annual) particularly to those refuges located in the San Joaquin Valley, would likely interfere with Reclamation's capability to deliver due to facility constraints.

Question. What about the requirement for additional refuge deliveries by the year 2000? Would this require the construction of additional delivery facilities?

Answer. Yes, additional facilities would be required by the year 2000 to deliver Level 4 (full) water supplies to several of the refuges in the quantities and at the times desired. It is anticipated that facilities constructed to provide Level 2 supplies would be designed to the capacity of Level 4 deliveries.

Question 7. What are the projected energy demands for satisfaction of the energy requirements related to fish and wildlife projects undertaken pursuant to S. 484?

Answer. Until the extent of the facilities to be constructed and the quantities of water to be delivered are more clearly defined, it will not be possible to provide a reasonably accurate estimate of the power demand.

Question a. What is the price for CVP project power?

Answer. The current rate for CVP power is approximately 15 mills per kwh. This rate includes the operation and maintenance costs of generation as calculated by Western Area Power Administration (Western) for FY 1991, and a capital repayment component determined by Reclamation.

Question b. What is the price for preference or surplus power from the CVP?

Answer. According to the most recently published power repayment studies, the composite CVP preference rate is 31.53 mills per kwh. As of October 1, 1991, the rate will become 32.60 mills per kwh effective through May 31, 1993. We presume that the question addresses firm commercial power as approved by FERC October 21, 1988 (45 FERC Par. 62.921). This rate includes a return of interest-bearing power investment and assists return of irrigation investment.

Question c. What would be the impacts of providing energy for fish and wildlife projects on the price of CVP power and CVP repayment?

Answer. Any increase in CVP power load levels will reduce the surplus CVP generated power available to support preference load levels. Western has taken the position that it will not reduce the power it supplies preference customers as a result of increases in project power load levels. Thus, reductions in surplus power would be offset by Western through additional energy purchases on the open market at roughly 36 mills. That would result in energy purchases of at least $500,000 per year (based on a 15-GWh limit). The additional energy purchases would increase the cost to preference power customers.

Question d. Is there a limit in S. 484 on the amount of energy which would be provided for fish and wildlife?

Answer. It is our understanding of the language in the bill that any project for fish and wildlife purposes designed to carry out the intent of the Act would be entitled to project power under Section 8(b) without limit.

Question 8. Under the terms of S. 484, new or amended contracts for the delivery of irrigation water are restricted to not more than one year unless a number of conditions are met. Realistically, how long do you think it will take for the Secretary to satisfy the requirements before he is able to enter into long-term contracts?

Answer. As I indicated during the hearing, it is our view that, as a worst case, the conditions which must be met, coupled with the provision for "citizen suits" could effectively preclude either new, renewal or amended long-term contracts for CVP water.

Question a. What is the result if CVP contractors are forced into accepting one-year contracts? What would be the impact on the farming community and the many other businesses and labor who depend upon farming for their livelihood? What would the estimated cost be on related Federal programs, such as those administered by the Departments of Labor, Agriculture, or Health and Human Services?

Answer. We have not performed any analysis of these impacts on the farming community or other Federal programs.

Question 9. S. 484 speaks of the obligations of the CVP for meeting water quality standards in the San Francisco Bay, Sacramento-San Joaquin Delta Estuary. Assuming that there is such an obligation and that the project is operated to meet those standards, would there be beneficiaries—other than fish and wildlife—of meeting those standards? Who would they be? Have these same entities benefited from past CVP operations in regard to water quality? Do they pay for the benefits received? Under the terms of S. 484, would they pay for the additional benefits received?

Answer. The CVP is operated to meet water quality standards set forth in an agreement with the California Department of Water Resources. That agreement, executed in 1986, and usually referred to as the Coordinated Operations Agreement, sets out water quality standards to be met at numerous locations in the Sacramento-San Joaquin Delta including the intake to the Contra Costa Canal as required of the Secretary under P.L. 99-546. Meeting those standards provides incidental water quality benefits to others diverting from Delta channels. Diverters currently benefitting from this improved water quality include agricultural diverters in and adjacent to the Delta and a number of diverters, commonly referred to as offshore diverters, who divert water for municipal and industrial purposes. The offshore diverters, located mostly in Contra Costa County on the shore of the San Joaquin River, use water for a number of industrial processes, such as cooling water, and for municipal and domestic use. The improved water quality benefits resulting from CVP operations have not been subject to any form of assessment in the past and would not become subject to assessments under S. 484.

Question 10. Section 5 requires that a contracting district or agency must require all groundwater pumps be metered.

—Are there individuals within a district not receiving project water?

—Is groundwater a matter of Federal or State jurisdiction?

—What happens if a person within a district not receiving project water refuses to install a meter?

Answer. Section 5 requires that meters on all surface water delivery systems and groundwater pumps be installed within 5 years of contract execution, amendment, or renewal. There are individuals within many districts who do not take project water. Regulation of groundwater is a matter of State jurisdiction. If a meter is not installed, the district is considered in violation of the contract.

Question 11. What is the potential effect on repayment if you are unable to enter into or renew contracts?

Answer. The inability to enter into new water service contracts for the remaining yield of the CVP would result in water rates for the existing contractors increasing to meet the repayment of the project. In those few cases in which the increased water rates would exceed the payment ability of a contractor, repayment assistance from the power users will increase. The project will still be paid out by the required 2030 date.

The inability to renew existing contracts could adversely impact the CVP repayment. Restricting contracts to one year terms and the uncertainty associated with one year contracts could impact the agricultural sector of the economy. In order to meet the 2030 repayment date, increased power revenues could be required.

Question 12. What happens to repayment if providing unlimited, power at CVP rates for fish and wildlife and a $30 million surcharge results in making CVP power unmarketable? Would these effects meet the "PAYGO" requirements of the Budget Agreement?

Answer. If power allocated to fish and wildlife is to be assessed its share of the $30 million surcharge, repayment will probably not be jeopardized. In the event that power was not marketable at all, revenue would decrease to the extent that power repayment would be assigned to irrigation, a noninterest bearing function.

Because the proposed Act would affect Federal revenues and direct spending, it is subject to scoring under the PAYGO requirements of the Budget Enforcement Act of 1990. The total impact of the deficit between FY 1991 and FY 1996 cannot be made until the power demand is determined, but we estimate that it would not be significant.

Question 13. The legislation has been described as setting a cap of $30 million per year on CVP users. Is there a cap in this bill?

—Are requirements of the Endangered Species Act waived?

—To the extent that the proceeds of the $30 million are used for recreation or economic development, are CVP users absolved from all mitigation requirements?

Answer. There is no "cap" mentioned in the bill. The bill specifically provides for generation of $30 million annually (at 1990 price levels) for the trust fund. Since the bill does not specifically waive the requirements of the Endangered Species Act (ESA) or the mitigation requirements, it is our position that the CVP water users are not granted relief in these matters.

Question 14. How many bidders would you expect who could take direct delivery of 100,000 acre feet of water?

Answer. It is not possible to accurately predict how many bidders will respond. There may be only one bidder, an umbrella agency acting on behalf of a number of bidders, or many bidders.

Question 15. What is your estimate of the total potential additional storage which could be developed within the CVP Service Area?

Answer. A conservative estimate is that between 1 and 2.5 million acre-feet of additional storage capacity could be developed within the CVP. This does not include the Enlarged Shasta Project which was dropped due to economic infeasibility. This estimate of additional storage capacity would include a multipurpose dam at Auburn and off-stream storage reservoirs throughout the Central Valley. Additional storage should be considered along with water management options, such as water conservation, conjunctive groundwater use, use of reclaimed water, and other water augmentation opportunities.

Question a. What would be the potential benefit of such storage for:

(1) Needs of the Delta:

Answer. Because of the California State Water Resources Control Board's Decision D-1485, and ongoing water quality requirements in the San Francisco Bay-

Delta, it is critical to maintain water quality at the highest practicable levels. Additional storage would allow Reclamation to meet the needs in the Bay-Delta plus provide higher quality water south of the Delta for now and in the future.

(2) Anadromous fisheries:

Answer. The additional storage would provide greater quantities of water in storage which would ultimately provide for releases of cooler water to support the anadromous fisheries such as the winter-run salmon.

(3) Wetlands and migratory bird habitat:

Answer. The loss of California wetlands has diminished both the habitat and the number of migratory birds in the Central Valley portion of the Pacific Flyway. Additional water from storage facilities could assist in restoring these wetlands and provide for larger flows into existing wetlands, thereby facilitating increases in the migratory waterfowl population in the Central Valley.

(4) Indian tribes:

Answer. Because of the many legal issues involving water rights and allocations for the Indian tribes, additional storage would provide a more reliable firm yield to meet these needs.

Question b. What would be the cost for construction of such storage and related delivery systems?

Answer. The total cost of such a construction program would be dependent upon the storage and conveyance facilities authorized by the Congress in the final legislation. Accordingly, a rather preliminary estimate is that it would cost between $2 and $4 billion (1991 costs) to construct the additional storage facilities.

Environmental Protection Agency,
Office of Federal Activities,
Washington, DC, May 31, 1991.

Hon. Conrad Burns,
U.S. Senate, Washington, DC.

Dear Senator Burns: Concerning the hearing on May 8, 1991, before the Senate Subcommittee on Water and Power regarding Senate Bill 484 (the Central Valley Improvement Act), you asked me to answer your additional questions which time did not permit you to ask. Enclosed is my response to your request.

Your staff may contact me at 382-5054 or Shannon Cunniff at 382-5067 if you desire additional information from the agency regarding its position on Senate Bill 484.

Sincerely yours,

Richard E. Sanderson,
Director.

[Enclosure.]

Responses to Questions From Senator Burns

Question 1. Your statement says a lot of good things are now being done by the Bureau in California—yet you go on to say the bill is needed. What specific new authorities in S. 484 are needed by the Bureau?

Answer. EPA is not an authority on the many legislative authorizations affecting the various Bureau projects. Our response to this question is based primarily on the continued discussions that the Agency has had with the Bureau over the past few years. We believe that the Bureau would benefit from the following specific congressional authorizations:

(1) Authority to include water transfer provisions in all Central Valley Project (CVP) water service or repayment contracts.

(2) Authority to sell certain amounts of Project water to municipal and industrial users in California.

(3) Authority to treat fish and wildlife protection as an equivalent Project purpose of the CVP.

(4) Authority to establish a mitigation and restoration trust to remedy the negative environmental effects of the Project.

(5) Authority to establish an office on water conservation practices for the Central Valley, and to provide financial assistance to certain contractors implementing water conservation measures.

Question 2. Could you explain the meaning EPA ascribes to the words "fair and equitable" treatment as used in S. 484?

Answer. The question appears to refer to S. 484 6(a)(2), which authorizes and directs the Secretary "to operate the Central Valley Project so as to . . . provide equitable treatment for fish, wildlife, and related habitat with the other primary purposes for which the Central Valley Project is authorized to be operated."

We understand equitable treatment to mean giving equal priority to the water needs of fish, wildlife, ad related habitat. In the past, Reclamation has recognized the needs of fish and wildlife as secondary—that is, operating the Project to first meet the requirements of agriculture, domestic uses, flood control, ad power before considering fish and wildlife needs.

Question 3. EPA is given specific approval authority over the California Water Board's Bay/Delta standards.

a. Do you support that provision?

Answer. The proposed bill does not give EPA a new authority over water quality standards. Under Section 303 of the Clean Water Act, EPA is already required to review and approve each state's water quality standards within a specified period of time after their revision by the state.

Section 4(a)(2) of S. 484 proposes a general bar of new CVP water contracts until EPA completes this statutorily-mandated review. As a matter of policy, EPA has previously noted in its comments on the Bureau's proposed contracting of available water that we believe the Bureau should delay any such contracting until the present revisions of Bay/Delta water quality standards are completed and approved. Otherwise, the Bureau would be contracting this water without any knowledge of the terms and conditions that will be imposed on water diversion permits by the State Water Resources Control Board in order to attain those revised water quality standards.

b. What standard would be used in granting or denying approval?

Answer. The standards for approving or disapproving water quality standards are specified in 40 CFR 131.5 and 131.6. EPA must find that the state's water quality criteria are sufficient to protect the designated urban, agricultural, and environmental uses of the estuary. The criteria must be based on sound scientific rationale, and must be adequate to protect the most sensitive uses.

c. Do you have adequate technical and scientific expertise in that proceeding to make a determination as to the adequacy of the Board's final decision?

Answer. As the federal agency responsible for implementing the Clean Water Act, EPA does have the technical and scientific expertise to review the Board's final decision on water quality standards. EPA has been an active participant in the state's Bay/Delta proceedings, and our technical staff will thoroughly review the scientific basis of the Board's revised standards before making any decisions.

d. Given the position of EPA on approving long-term contracts, can you expect the Administrator to ever approve any of the proceedings under this legislation?

Answer. EPA has expressed serious concerns about the adequacy of the state's draft water quality standards for the estuary. However, these concerns are based on the requirements of the Clean Water Act and EPA regulations, and are unrelated to approval of long-term contracts or any other provisions of the proposed legislation.

Question 4. Is it EPA's position that enhancement rather than mitigation of ecosystems should be a project responsibility for all Bureau water projects? If yes, then, do you intend to apply that same standard to all other federal undertakings, such as Corps Projects, Highway funds, and Housing?

Answer. It is EPA's position that both mitigation and enhancement of ecosystems should be incorporated into all Reclamation projects and that environmental costs associated with projects should be paid by the users contributing to the adverse effects.

Authorizations for certain components of the Central Valley Project (such as New Melones and Shasta dams) have explicitly provided for mitigation of project impacts, but there is as yet no comprehensive congressional charge to Reclamation to mitigate for Project impacts.

Federal law and policy support incorporating environmental enhancement in federal actions. The National Environmental Policy Act affirms that federal agencies should design and conduct their programs to enhance the environment. Executive policy (E.O. 11514) provides that agencies shall initiate measures to direct their policies, plans, and programs for environmental goals, including environmental protection and enhancement. In this vein, Reclamation's "Implementation Plan—a New Direction for the Bureau of Reclamation" (1988) has established environmental restoration and enhancement as a high priority for the agency over the next decade. Implementation of this goal in the Central Valley Project would be assisted by clarifying Congressional support for enhancement and recognizing funding requirements, as in S. 484.

Question 5. In your view, what constructive purpose does the citizen suit provision of the bill serve?

Answer. In the last 20 years we have seen citizen suits fill gaps in the implementation of environmental legislation, and I would note that the recently authorized Clean Air Act Amendments did include a provision for citizen suits.

Question 6. Is there any consideration being given to the increase of the California population (projected to be an additional 10 million people over the next 10 years) and the demands that will place the State's water supply?

Answer. We believe this bill provides several measures which will assist Reclamation in planning and managing water supplies in response to population and environmental changes in coming years. In the first place, the transfer provisions [5(a)] would facilitate statewide CVP water transactions; at present, CVP water deliveries are restricted to the authorized service area (essentially, portions of the Central Valley and the San Francisco Bay area). Authorizing voluntary water transactions such as sales, exchanges, and leases also will help distribute water in response to changing demographics.

With increased water demands conservation measures will be important as well. The bill strengthens water conservation plans now required pursuant to the 1982 Reclamation Reform Act, calling for more explicit conservation standards and criteria, expanding Reclamation's enforcement responsibilities, and establishing an incentive-based program to assist irrigators in implementing conservation plans.

Finally, the bill directs Reclamation to prepare a programmatic environmental impact statement on water contract renewals—a measure which EPA has long supported. This programmatic document should be used by Reclamation to comprehensively examine how CVP water management will respond to changing socioeconomic and environmental conditions.

Question 7. How does this legislation, which provides fish and wildlife resources with the first share of CVP water, meet the critical needs of the state in a drought situation?

Answer. It is important to recognize that the critical water needs in California during droughts are felt by fish and wildlife as well as agriculture, cities, and other consumptive uses. The proposed legislation does contain several measures which would expand "dependable" water supplies for fish and wildlife. For example, the revenues collected from transfers could be used to acquire water rights for habitat areas, and a portion of water subject to contract renewal would be dedicated to benefit fish and wildlife. Also, the Secretary is directed to provide "firm water supplies" to specified refuges and wildlife areas in the Central Valley.

These measures to provide firm water supplies for environmental resources do not necessarily mean that these resources would receive "the first share" of CVP water relative to all other uses during droughts. However, in contrast to the present situation, these resources would have equitable claims on available water. Currently most wildlife areas (including refuges) lack water rights to afford an adequate, dependable water supply. Wildlife areas without firm water rights must seek water (as available) from contractors and other water rights holders. Some areas take agricultural return flows and drain water, which in extensive portions of the San Joaquin is of poor quality. During drought wildlife areas without dependable supplies are the first to suffer from the shortage. This proposed legislation would help correct this situation.

As our response to Question 6 brings out, the proposed legislation would also contribute to meeting critical needs in other ways. For example, providing for voluntary transfers of CVP water anywhere in the state helps direct water to areas and uses of greatest need; water marketing and conservation measures should provide incentives for more efficient use of water.

Question 8. Will this bill lend to, or subtract from, additional flexibility in the CVP system?

Answer. The bill will significantly increase flexibility with respect to the geographic area within which CVP water may be delivered (all of California, rather than the current, more restricted, service area). It also adds protection, restoration and enhancement of fish and wildlife as an authorized "primary Project purpose," thus expanding the operational scope of the CVP. The provision in Section 5(a) with respect to the ways in which water may be "transferred," including such measures as sale, lease, and exchange, also clarifies and expands CVP water transactions.

EPA believes that operational flexibility can only be fully successful when bounded by reasonable guarantees of meeting water quality standards and providing adequate water supplies for fisheries and wildlife areas.

Question 9. Does EPA have any concern that reducing surface deliveries by 10-20% as a condition of contract renewal could result in increased groundwater pumping?

Answer. The question refers to Section 4(c)(1) of the bill, which would allow the Secretary to renew existing water contracts before specific environmental protection requirements are met, providing a portion of the contract water is dedicated to fish and wildlife purposes.

EPA recognizes that, in response to reduced surface water deliveries, contractors may increase groundwater pumping to make up the loss. (However, in many cases the 10-20 percent of surface supplies withheld from contractors would probably be devoted to instream, refuge, or other habitat needs in the basin and would contribute to groundwater recharge.) We also recognize that significant groundwater overdraft is already occurring in the San Joaquin and Tulare basins.

We encourage the Bureau and other water suppliers to work with the state, which holds the primary authority for groundwater regulation, to develop effective management plans. We note that S. 484 would contribute to better management by requiring installation of groundwater pump meters at the time contracts are initiated, amended, or renewed.

APPENDIX II

Additional Material Submitted for the Record

Environmental Effects of Living and Working
in Agricultural Areas of California

Social and Economic Factors

Don Villarejo

California Institute for Rural Studies, Inc.
221 G Street, Suite 204
Davis, CA 95616

Prepared for

Seminar on the Health Risks of Living and Working
in California Agricultural Communities
June 6 and 7, 1990

University of California, Davis

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Environmental Effects of Living and Working in Agricultural Areas of California

Social and Economic Factors

Don Villarejo
California Institute for Rural Studies, Inc.

California's Emergence as the Leading Agricultural State

California is the nation's leading agricultural state. We now have 60% more production of agricultural commodities than does second ranked Texas (as measured by farm cash receipts - farm sales).[1] California emerged as the nation's leader about 45 years ago when, for the first time, its output of crops and livestock exceeded that of Iowa, previously the leader among the states. Since that time California has led the nation, and, of greater significance, its share of national crop production has steadily increased.

With just 2.5% of the nation's cropland California now has 16% of all crop production (again, measured by value of farm cash receipts).[2] By way of contrast, Texas has 5% of U.S. crop production, but has 8% of the nation's cropland, three times more than California.[3] The major elements contributing to our state's leading role as a producer of crops are, of course, our unusual combination of favorable climate, high quality soils, abundant supply of agricultural labor and irrigation.

Irrigation has been a critical feature in developing California's leadership in agricultural crop production. Figure 1 shows the long-term trend of irrigated acreage in the state. We have nearly doubled the amount of our irrigated land over the past fifty years. While the total amount of the state's cropland has declined, the fraction of our cropland that is irrigated has increased.[4] Nearly all of the net decline in the state's cropland over the past thirty-five years has been in the category "Cropland used only for pasture or grazing." There has been no loss of harvested cropland in this period.[5] Contrary to the popular wisdom, we have actually experienced some modest growth in the amount of our irrigated cropland.

One important consequence of this increase of cropland in the state is that we have significantly increased the amount of our fruit and vegetable production. Consumer demand has favored more fresh produce in recent years and California farm producers have responded to this change because they have the infrastructure in place to produce greater amounts of produce. Figure 2 shows the 70% increase of vegetable production our state has experienced in the past twenty years. Similarly, Figure 3 shows the 40% increase in the production of tree fruit in California in the same period while Figure 4 shows the increase in grape production. Some crops, such as broccoli and strawberries, have experienced even greater increases than these figures suggest.

Another type of crop that has become extremely important in recent years is the broad category of "Nursery and Greenhouse Crops." This type of crop now accounts for more farm sales in California than does all of our grain and cotton production combined.[6] On a national basis, nursery and greenhouse crop production has a greater value in farm sales than does the combined wheat production in all of the fifty states.[7]

In the context of the present discussion, these production increases are all in crops that have substantial labor requirements. Prof. Juan Vicente Palerm has described this as the "re-laborization of agriculture."

California's Crop Diversity

California also has a cropping pattern that differs greatly from that of the U.S. as a whole and is related to our favorable combination of climate, irrigated land and other factors described above. Figure 5 shows the distribution of crop production by type of crop for the U.S. as a whole. About two-thirds of U.S. farm production is field crops, about one-third is vegetables, fruits and nuts, and nursery crops. Figure 6 shows that, for California, the pattern is the reverse. Just one-fifth is field crops while four-fifths is vegetables, fruits and nuts, and nursery crops.

Overall, our state now produces 39% of all U.S. vegetables and melons, 53% of all fruits, nuts and berries, and 24% of all nursery and greenhouse products.[8] While the farm value of grains in the U.S. dropped during the 1980s, the farm value of the other crops increased dramatically.

California has just 2% of U.S. grain production and only 6% of all livestock and livestock product output.[9] However, our dairy production is second only to that of Wisconsin and it now appears likely we will become the leading dairy state early in the next century.[10]

From this discussion, it should be clear that one reason why we are the nation's leading agricultural state is that we produce far more higher value crops than do other states. Our crop production value per acre of harvested cropland is about $1,207, whereas for the U.S. as a whole it is just $209.[11]

The crop diversity described above also suggests that California's agriculture is segmented. That is, production and marketing in a particular crop industry are, to a great degree, independent of trends in another type of crop. This implies that efforts to generalize about California agriculture will usually lead to frustration instead of insight. For example, during the farm recession of the mid-1980s grain producers experienced severe financial stress. But California producers of nursery crops, strawberries and citrus crops enjoyed excellent financial returns at the same time that their grain growing neighbors were fighting to survive.

Characteristics of California Farms and Farmers

California has a high degree of size concentration among farms as compared with other states. The biggest 3.4% of California farms, those with annual farm sales of $1,000,000 or more, have 60% of all of the state's agricultural production.[12] These large farms average $2,961,600 in cash receipts from commodity sales per farm.[13] Thus, the great majority of California farm production is accounted for by large-scale farm businesses.

Paradoxically, most California farms are quite small, having annual sales of less than $50,000. 71% of California farms are in this size category.[14] But, taken together, they account for just 4.1% of all farm cash receipts.[15] Nevertheless, the aggregate value of production of these small farms comes to $565,882,000, which is bigger than total farm production of each of eleven states.[16] Thus, a very large proportion of California farms have, individually, a small amount of production, but, taken together, their aggregate production is quite significant, especially when compared with the total production of many states.

California has 83,217 farms but only 41,906 of farm operators report that their principal occupation is farming.[17] We shall refer to these persons as "farmers." For the other half of California farms, either a professional farm management company or a part-time farmer conducts the farming activities. We estimate that approximately 15,700 California farms are both owned by non-farmers and are also managed by professional farm management companies which, in turn, hire employees to perform the required farm work.[18] The balance of 25,600 California farms are directly operated by persons whose principal occupation is something other than farming (part-time farmers).

There is considerable variation in the proportion of "farmers" as a share of total farm operators among the various types of farms. For example, among dairy farms, about 88% of the operators report their occupation as farmers.[19] But among fruit and nut farm operators, just 47% are farmers.[20] And among beef cattle farms, the figure is only 45%.[21]

One of the most important recent developments concerning the typology of farmers is the rise of farm management companies. These are businesses that contract to conduct the day-to-day business operations of a farm that is typically owned by a non-farmer. At present, there are about 350 such companies managing an estimated 15,700 farms in California.[22] This is 19% of all of the farms in the state. Among fruit and tree nut farms, the share managed by professional farm managers is even higher. We estimate that 9,902 California fruit and nut farms, about 26% of the total, are run by professional managers.[23]

The average age of California farmers - those whose principal occupation is farming - is 55.6 years.[24] Fully 31% are over 65 years of age and only 9% are younger than 35.[25] Thus, California's farmer population is quite old as compared with other categories of work. About 89% are male and just 4% are persons of Spanish origin (including Portuguese).[26]

Interestingly, about 70% of farmers live on the place they farm.[27] This is comparable to the figure of 67% reported by those farm operators whose principal occupation is an activity other than farming.[28] For about two-thirds of both types of farm operators home, is also the place where farm work is done.

The 41,906 California farms which are operated by farmers account for 87% of all of the state's farm production.[29] They also account for 90% of the total net cash return from farming, an average of $63,043 per farm.[30]

The remaining 41,607 farms - those operated by non-farmers - produced just 13% of total farm sales. And they were also far less profitable, averaging only $7,319 per farm in net cash return from farming.[31]

Non-farm income of California farm operator households in 1987 is estimated to have been about $2.405 billion.[32] It is not possible to directly determine the shares of this non-farm income between farms operated by "farmers" and those operated by "non-farmers." However, if this income were apportioned according to the number of days of off-farm work reported by these two groups we estimate that "farmers" shared in 17% of this off-farm income and "non-farmers" earned 83%.[33]

Using this estimate we place 1987 average "farmer" operator income from all sources at $73,017 and average "non-farmer" operator income from all sources at $55,076.

Trends in Agricultural Pesticide Use in California

One of the concerns of great interest in agriculture today is the subject of pesticide use. The most recent summary of reported pesticide use in agriculture in California is the Pesticide Use Report, 1988 issued by the California Department of Food and Agriculture.[34] The use of about 105.6 million pounds of active ingredients was reported to CDFA. Approximately 8.7 million pounds of this total represented non-agricultural uses, so the total figure for agricultural use was 96.9 million pounds.

Though required reporting in that year was limited to "restricted use" materials, a substantial share of the reported use consists of non-restricted materials. For example, the leading pesticide use reported was sulfur, a non-restricted material, with a total use of 27.1 million pounds, or about 28% of all reported agricultural pesticide use in the state. It is somewhat ironic that the leading pesticide use reported to CDFA is sulfur, a pesticide permitted under California's organic certification laws.

Sugar beets used the most pesticides with 13.7 million pounds, followed by cotton, with 12.3 million pounds, and grapes, with 12.0 million pounds. Fresno County, the nation's leading agricultural county, was also the leading county in California in terms of reported pesticide use, with 16.2 million pounds; followed by Kern County, with 11.4 million pounds; and San Joaquin County, with 6.7 million pounds.

In 1977, agricultural pesticide use reported to CDFA was 111.3 million pounds, suggesting that there may have been a 13% reduction in statewide pesticide use over the period from 1977 to 1988.[35] However, this observation must be made with great caution because only a portion of all pesticide use is reported to CDFA each year and because CDFA changed its method of computing active ingredient poundage for liquid materials in 1984.[36]

Use of agricultural chemicals is also reported to the Census Bureau, in conjunction with the Census of Agriculture, every five years. These data can be analyzed to identify possible trends.

The number of California farms reporting any use of agricultural chemicals was 52,614 in 1987, a substantial increase over the 43,142 farms reporting chemical use in 1982 or the 46,449 farms reporting chemical use in 1978.[37] This is shown in Figure 7. However, the acreage on which these chemicals were used in 1987 was lower, in all categories of use, as compared with 1982.[38] This is illustrated in Figure 8. But this observation must also be treated with caution since 784,000 acres of cropland were idled in 1987 under federal acreage reduction programs as compared to just 130,528 acres in 1982 and 85,586 acres in 1978.[39]

Employees of California Farm Businesses

Martin has shown that an estimated 1.2 million persons earn wages from hired farm work in California each year.[40] Total wage payments by agricultural employers suggest that the average farm laborer's annual earnings from agriculture in California are about $3,000 per year.[41] However, many persons employed in agriculture have non-farm occupations and earn only a small income from temporary employment on farms. Thus, annual average hired worker employment on California farms is only about 325,000, reflecting the fact that many jobs are of short duration. This is shown in Figure 9.

About 750,000 persons earn a majority of their annual earned income from hired farm work and may be regarded as professional farm workers.[42] For each California farmer - a person whose principal occupation is farming

- there are about eighteen professional farm workers.

Hired farm workers now perform about 80% of all of the farm work in the state.[43] During certain months of the year this share exceeds 90%. Farmers and unpaid family members perform just 20% of all farm work in California.[44] The share of all California farm work performed by farmers and unpaid family members has been steadily declining in recent years. Forty years ago their share was about 37%.[45]

The dominance of large-scale farm businesses in California was described earlier. Of the 31,815 California employers reporting wage payments for the performance of agricultural labor, 1,031 (3.2%) account for 53% of all farm wage payments.[46] As in the case of commodity production, a relatively small number of firms account for most of the wages.

There are few studies of the employees of agricultural businesses. The most recent state-wide survey was conducted by Martin and Mines. They interviewed about 1,286 professional farm workers in a state-wide sample across crops and regions.[47] They report that more than three-quarters of interviewees were Mexican citizens or Mexican born.[48] The average age was reported to be 34 and the average educational attainment was about six years of school.[49] Further, reported annual earned income was about $4,300 per year from farm work and $320 per year from non-farm work.[50]

About 37% were migrants who followed one of two patterns: back and forth between Mexico and a definite location in the United States, or follow-the-crop migration within the U.S.[51] However, an independent study of the Ventura County citrus harvest shows an increasing reliance on young, single male migrant workers as compared to older, married settled workers.[52] Little information is available to ascertain whether this increased reliance on migrant workers is more widespread or is confined to the citrus industry.

Professional farm workers are without employment an average of 27 weeks each year.[53] Those of us who live and work in the Central Valley or other parts of the state where agriculture is especially important are well aware that unemployment cycles are closely tied to the annual cycle of farm work. In the San Joaquin Valley, the number of unemployed persons reaches its low point during the peak of agricultural labor demand in August or September of each year, and then steadily climbs to a peak in February or March, the time of lowest agricultural labor demand.[54] This is illustrated in Figure 10. By contrast, in Imperial County, unemployment usually reaches a low ebb in the winter months of December through February, when that county's vegetable harvest is in full swing.[55] And Imperial's unemployment peaks during July and August when vegetable production has ended. This is shown in Figure 11. Finally, Monterey County shows a pattern like that of the San Joaquin Valley, as illustrated in Figure 12, with the trough of unemployment during the spring-through-fall vegetable harvest and a peak of unemployment in the winter months.

EDD data show, as illustrated in Figure 13, that real wages earned by California farm workers, measured by average wages per full-time-equivalent (F.T.E.) farm employee, declined by 8.7% during the 1980s while non-agricultural average wages rose by 11.3%.[56] Whereas the ratio of average agricultural wages per F.T.E. employee to the comparable figure for non-agricultural employees began the decade of the 1980s at 55.5%, this ratio fell to 42.2% by the end of the decade.[57]

Economic theory shows that the price of a commodity will fall when supply exceeds demand and will rise when the reverse is true. In this context, we would argue that the price of agricultural labor has declined in the 1980s because there has been a substantial excess supply of agricultural labor.

The large and continuing flow of undocumented workers into the U.S. from Mexico and Central America, many of whom enter the labor market in agricultural work, suggests that this supply is likely to remain quite large. Virtually all immigrant farm workers now possess apparently authentic permanent residence visas. Thus, the intent of the Immigration Reform and Control Act to reduce, and ultimately stop, the flow of undocumented workers has not been realized. Unless immigration authorities devise a method to stop this flow of people, it appears likely that California agricultural employers will continue to tap this pool of workers.

One of the most important recent developments in the pattern of agricultural employment in California has been the remarkable increase in the use of farm labor contractors in the 1980s. This is shown in Figure 14. The greater reliance on labor contractors is mirrored by a decline in the use of direct hire employees by farmers. At peak season in the San Joaquin Valley, when 217,000 hired workers are harvesting crops and performing related tasks, a majority of the work is performed by persons working for farm labor contractors.[58]

Labor contractors usually do not offer employee benefits, and pay wages about 20% lower than do farm operators who directly hire employees.[59] Thus, the tendency of farmers to increasingly meet their labor needs through labor contractors is an important factor in the decline in farm employee real wages noted above.

Alvarado and co-workers have recently published findings based on interviews of 361 agricultural employees in the central and southern San Joaquin Valley.[60] The interviews were conducted in the period June through October 1989 and all persons interviewed were currently employed in agriculture. The sample was carefully constructed to represent a range of crops and employer size (as measured by annual payroll).

Their principal findings were:

- seven of ten workers were male but fully half of workers in grapes, nuts and vegetables are female;
- mean average age was 35;
- only 6% were born in the U.S. and 87% were born in Mexico;
- mean average years of school completed was 5.9;
- those interviewed reported working for an average of 2.9 agricultural employers during the course of one year;
- 84% reported periods of unemployment during the calendar year;
- about one-third were able to find non-agricultural jobs between farm jobs;
- average length of employment in agriculture was 22 weeks;
- on average, farm employees worked in at least two different crops during the 1989 summer season;
- more than three-fourths expect to remain in agricultural work.

Surprisingly, only 50% draw unemployment insurance payments during periods of unemployment. About four of ten workers prefer to rely on their own savings for support in this circumstance. Less than 1% report obtaining support from public assistance or AFDC. And just under 2% report using food stamps.

Fully 20% reported having been injured while working at a farm job within the past five years, and 84% of these required medical attention. Some 40% of those reporting on-the-job injury were off the job for more than one month.

Questions were also asked concerning health status. 18% rated their own health status as "excellent," 25% said "very good," 39% said "good," 13% said "fair," and 4% said "poor." The average number of years since their last physical examination was 1.8. About 30% said they smoke. Only 41% said they received medical insurance coverage as an employer benefit.

When asked to identify the most serious problems faced by farm workers, 33% listed "pesticides;" 23% listed "low wages;" 8% listed "work hazards;" and 4% listed "abusive labor contractors."

The finding of Alvarado and co-workers that the overwhelming majority of farm employees plan to remain in farm work should not be surprising. With an average education of just six years and lacking English, there will be very few, if any at all, opportunities for alternative employment.

Agricultural communities in California are home to a large proportion of the working poor. More than 80% of agricultural employees are Mexican-born and a majority are not U.S. citizens. Therefore, agricultural workers in the state tend to be both poor and members of an ethnic minority as well as immigrants.

Agriculture and Communities

The three leading agricultural counties in the United States are Fresno, Kern and Tulare counties in California. All three are considered urban counties by the Bureau of the Census because each contains a Standard

Metropolitan Statistical Area (SMSA). Thus, the strict Census Bureau definition of rural, being a place of 2,500 persons or less, is not very useful in identifying California communities where agriculture is particularly important. In fact, Californians are 97% urban, the most urban of all of the states whereas, as we have already noted, the Golden State is also the leading agricultural state!

While there are various measures of community economic and social conditions, one that is used in the Census of Population stands out because of the unexpected high ranking of communities in our Central Valley. This measure is the proportion of residents supported by welfare. Of the ten SMSAs in the entire U.S. with the highest proportion of residents supported by welfare payments, six are in California and all six are in the Central Valley. They are, in order, with the percent of residents supported by welfare payments also indicated, Visalia (15.9%), Stockton (14.4%), Yuba City-Marysville (12.4%), Fresno (12.3%), Modesto (11.8%) and Redding (11.6%).[61] The remaining four areas in the top ten are Jersey City, Atlantic City and Vineland in New Jersey and New York City. None of these come close to Visalia in percentage of residents on welfare. Thus, California's predominant agricultural area most resembles Eastern urban ghettos in terms of this measure of poverty.

MacCannell and co-authors have demonstrated that farm size, averaged over counties in the Sun Belt states, is negatively correlated with a variety of measures of social conditions.[62] That is, the larger the average farm size in a county, the higher the proportion of the population in poverty, the lower the average family income and, more generally, the poorer the quality of life. Since California farms exhibit a high degree of size concentration, agricultural areas of our state fit this description exceptionally well.

MacCannell and co-authors have refined their measures of this inverse relationship using Census Tracts, Postal Zip Code areas, and areas bounded by city limits in 42 communities in the Western San Joaquin Valley. Much clearer negative correlations were found in this work. The strongest negative correlations between farm size and specific measures of social conditions were: median family income, adults with high school diplomas, adults with 4-year college degrees, professionals in the labor force, home ownership, households with complete plumbing, and medical services.[63]

MacCannell directly demonstrated that, in the 42 San Joaquin Valley communities which he studied, median family income was negatively correlated with employment in farm work.[64] The greater the proportion of the community population in the agricultural labor force, the lower the median family income of the community and the poorer the social conditions.

We have already noted that California agriculture is heavily dependent upon hired farm workers. Surveys of farm worker family income show that average levels are well below the poverty level. Thus, MacCannell's correlations generate a profile of farm worker communities.

Within California there are 132 cities or communities where at least 5% of the employed population works in agriculture.[65] Of these communities, 61 have at least 10% of the employed population working in agriculture. For this reason they may be thought of as "agricultural communities." The two largest cities are Oxnard (1980 population equals 108,195) and Bakersfield (1980 population equals 105,611) where this share is 15% and 5%, respectively.[66] Within these 61 communities the 1980 Census of Population showed that 47% of the aggregate population was Hispanic, 48% was non-Hispanic white and just over 5% of the population was Black, Asian or Native American. For non-agricultural communities, the median distribution of population in 1980 was 9.2% Hispanic, 82.7% non-Hispanic white, 1.6% was Black, 2.6 was Asian and 0.8 was Native American. This sharp difference between "agricultural" and "non-agricultural" communities is closely related to the previously noted high proportion of Mexican-born persons among the hired farm work force. Most of these communities are now described as "Rural Latino Settlements" by California demographers. Those with Latino population exceeding 20% are shown in Figure 15.

California has experienced very rapid population growth during the 1980s, with much of the expansion concentrated in major urban centers. As of January 1, 1990, the fastest growing large city in California is Fresno, adding to its population at a 4.3% per year pace. Over the period 1980-1988, state population growth was 19.6%. But in the 61 agricultural communities mentioned above, the population increase amounted to 27.6%, nearly 50% higher than for the state.[67] Thus, it is an error to assume that just because the state population is highly concentrated in major urban centers, the agricultural communities are growing slowly or declining.

With respect to earned income, however, the situation is the reverse. Between 1979 and 1987, per capita income in the state grew by 59.1%.[68] But in the 61 agricultural communities, the median rate of growth of per capita income was just 28.9%, 50% lower than for the state as a whole. As a consequence, agricultural communities lost ground over this period, with the ratio of per capita income to that of the state falling from 0.631 to 0.553.

In these communities the higher the fraction of people employed in agriculture, the larger the Hispanic population and the lower the median education level. The community with the highest share of employed persons working in agriculture is Huron (63%), where the Hispanic population accounts for 91% of the residents. In Huron the median educational level among those 25 or older is 5.9 years.

There are eleven cities where at least 10% of the working population is employed in agriculture and in which there are at least 10,000 persons of Hispanic origin: Bakersfield, Calexico, Chino, El Centro, Indio, Merced, Oceanside, Oxnard, Santa Maria, Santa Paula and Watsonville.[69] Eight of these cities are located within counties that rank among the top eighteen counties in the entire U.S. in agricultural production.

There are six communities where the percent of the working population employed in agriculture exceeds 50%: Cutler, Earlimart, Huron, McFarland, Mendota and West Parlier.[70] In their study of 42 westside San Joaquin Valley communities, MacCannell and co-workers identified five places where over 50% of the households included persons self-employed on farms ("farmers"): Dos Palos, Gustine, Los Banos, Patterson and Tranquillity.[71] The significant observation here is that these two lists have no overlap. These communities are clearly divided into "farmworker" and "farmer" towns. While no formal study has yet been undertaken, a longitudinal determination of the tendency of communities toward these extremes would be useful.

Access to Health Care

In an early meeting of the planning committee for this conference, Bob Spear remarked, almost as in passing, that the single most important factor in determining health is socio-economic status. Based on the information presented in the previous sections of this report, conclusions regarding health status of agricultural employees are probably predictable. But, in addition, there are problems peculiar to agricultural areas of California today that require some attention. We will focus first on those that affect all members of agricultural communities, whether farmers, farm employees or others.

In its recently issued report titled "Health Care in Rural California," Senate Office of Research Legislative Analyst Elizabeth Hill noted that "Access to health care in rural areas is limited, in part due to long distances between isolated communities, rough weather conditions, and depressed economies. Over the years, access has been further restricted by the closure of rural facilities and the failure of rural communities to attract and retain health personnel." Significant areas of the state where agriculture is especially important suffer from deterioration of a major element of their health care system.

While there is no direct information concerning the extent of health insurance coverage of farmers in California, their relatively high average income noted earlier and the ready availability of coverage through such organizations as the California Farm Bureau Federation suggests that it is likely that relatively few farmers lack this type of protection.

There is also a paucity of information regarding health insurance protection for farm employees. However, the annual survey of wages and employer-paid benefits conducted by the California Farm Bureau Federation (FELS survey) does report on the fraction of those employers offering health insurance benefits. Approximately 823 farm employers responded to the 1989 survey. About half of the employers provide full coverage for year-round employees and their dependents. But only 16% provided this coverage for seasonal employees. About 60% of employers report providing medical insurance for year-round employees only (employee dependents not covered) while just 19% provided that coverage for seasonal employees. Thus, at most, employers report providing medical insurance for about 35% of their seasonal employees. Since this coverage ends with the end of the seasonal employment period, even those employees are likely to be without coverage for an average of half of each year.

As noted previously, Alvarado and co-workers found that 30% of all farm workers in the areas they surveyed had no medical insurance of any kind during their period of employment. This lack of coverage and low levels of earned income could lead people to cut back on "discretionary" or preventive measures. However, the pattern of agricultural employee use of conventional medical care appears to differ substantially from patterns found among the general population. Mines and Kearney found that Tulare County farm employees made greater use of doctors and dentists than does the overall non-white population in the U.S.[72] And for children of 14 years age or less, and for those over 65, Tulare County farm employee families had a higher number of visits to doctors and dentists than is the case for the U.S. population as a whole.[73] But for members of Tulare County farm worker families between the ages of 15 and 64 the average number of doctor or dentist visits per year was much lower than for the general population.[74]

Migrant farm worker clinics operate in all major agricultural areas of California and are federally funded with the intention of meeting the medical needs of the state's migrant farm worker population. Generally, these clinics do not have sufficient resources to meet all of the identified health care needs of potential clients in their service area. In part, this reflects the decline in funding, measured in constant dollars, that has been experienced by federally funded migrant services during the 1980s.

An important consequence of these limits on available resources is that unanticipated clients or client needs may be unmet. For example, there are increasing numbers of migrant workers indigenous to Southern Mexico working in California agriculture.[75] A large fraction of these "new" migrants speak little, if any, Spanish and are relatively unfamiliar with California's social service systems. In order to serve this increasingly important population, migrant clinics will need to create an outreach program designed to embrace "indios." Such an effort will have to transcend important cultural as well as language barriers.

There are few empirical studies of the health status of farm employees in California. The most thorough investigation of the health status of farm employees in a large agricultural region of California was that conducted by Mines and Kearney.[76] They interviewed members of 472 farm employee households in Tulare County during 1981. Altogether 1,893 persons were interviewed. The most important findings were:

- although most farm workers think they have health coverage, only about one-fifth avail themselves of it, even in serious cases;

- farm workers with the lowest incomes are the least likely to gain access to government social insurance programs (welfare, food stamps, unemployment insurance, and social security);

- the most commonly cited minor health problems are (a) complaints such as headaches or nervousness, (b) dental problems, (c) skin irritations, (d) respiratory problems, (e) musculo-skeletal problems;
- the most common serious health problems reported are accidents and injuries;
- over half of the health problems occurring on the job are injuries;
- although injuries are the main cause of job-related health problems, farm workers in the sample fear chemicals more than accidents;
- in general, farm workers rarely miss work or seek medical treatment for chemical related problems;
- over 45% of workers said they got rashes, 44% said they got headaches, and 26% said they got eye irritations from agricultural chemicals;
- chemicals used on grapes seem to cause more trouble than any other combination of crop and chemical;
- dental problems are widespread;
- cigarette smoking is below the national average;
- excessive drinking on a daily basis is rare and drinking rarely interferes with work;
- lone Mexican males drink twice as much as Mexican men living with their families;
- of women who completed pregnancies since 1970, 18% had no prenatal exams and over [illegible] had none in the first trimester;
- the average death rate during the first year for children in the

entire sample is 4.5%;

- overall, farm workers pay for most of their health care out of pocket;

- the most common medical provider for people in the sample is the private doctor, with clinics next in frequency of use;

- hospitals are used only about 11% of the time, and hospital visits usually begin in an emergency room where lengthy waits are common and where pre-payment may be required.

Recently, the McFarland Health Screening Project released preliminary information concerning findings based on general health screening of children between the ages of one and twelve.[77] More than ninety percent of McFarland's eligible children were screened, numbering 1,717 persons in all. The screening was conducted between January and April of 1989 and included: parental interview; child interview (for children older than six years); physical examination; neurobehavioral examination; laboratory assessment of urine and blood; and the Achenbach Child Behavior Checklist. As noted previously, more than 50% of McFarland's labor force works in agriculture. It is likely that this study represents the most thorough health screening ever conducted among farm worker children in the United States.

Preliminary data show that 71% of the children were referred for medical attention. The three most common reasons for referral were vision problems (40%), dental problems (36%) and anemia (24%). Of the 1,639 children for whom a complete blood count was obtained, 22% were identified with anemia.

Data on health care access was also obtained in the interviews. It was found that 44% of McFarland families with children between one and twelve are not covered by any health insurance. Another 21% were on Medi-Cal. This means that just 29% of the families were covered by employer provided or privately purchased health insurance.

Low per capita income ($4,305) in McFarland as compared with the state as a whole ($11,885), together with inadequate insurance, make the cost of health care a nearly insurmountable barrier. Access to health care is also limited owing to the lack of a sufficient supply of private physicians in the community. It was also found that many residents were unaware of the McFarland Community Health Clinic, which receives significant state and federal support to offer low-cost health care.

The health status of the children reflects these barriers to obtaining health care. A large share of children had inadequate immunization status. Over 36% of the children lacked evidence of having been seen by a dentist. Untreated tooth decay was found in children of all age levels and appeared to have a frequency inversely proportional to income.

An important indicator of the breakdown of the health care delivery system to low income recent immigrants is the measle outbreak that affects thousands of California residents. Of thirty measles deaths reported in 1990 through April 25, nine were in Fresno County and all of these were among Hmong refugee children. In Salinas, seventeen of twenty reported cases this year were among young Hispanics, mostly girls below the age of ten. California requires vaccination as a condition of school admission, and, not surprisingly, most of the reported cases involve pre-school children or adults who do not attend school.

Community Health Concerns and Related Issues

There are a variety of community-wide health concerns that are associated with agricultural activity in California. Since many of these concerns are the subject of current research, we will simply note them with supplementary information concerning the status of research projects.

Air quality in the San Joaquin Valley is among the 10 worst in the entire U.S. The State Air Resources Board has commissioned a San Joaquin Valley air quality study that is due to be completed by July 1991. Fine particulate matter and ozone are of special concern. Major contributing factors include motor vehicle exhaust, burning of agricultural waste (rice straw, grain straw, orchard pruning), and cotton defoliation sprays. A bill recently submitted by Assembly Rep. Waters would authorize a study of the health effects of rice straw burning to be completed by January 1992.

Cotton defoliation sprays are associated with substantial numbers of complaints of respiratory illness among San Joaquin Valley residents. In 1981, the California Department of Food and Agriculture published a compilation of resident-initiated complaints.[78] A recent paper by Scarborough and co-workers documented these effects in the Bakersfield area.[79]

Pesticide sprays degrade air quality throughout agricultural areas of our state. On April 13, 1990, the California Department of Food and Agriculture suspended use of 1-3-dichloropropene, a pesticide used to fumigate soil before planting.[80] Better known by its trade name Telone, the material has been identified on the Proposition 65 list of chemicals known to cause cancer. High levels of the material were found in air samples in five separate sites in Merced County. The highest levels were found in air samples taken at Hilmar Junior High School where the concentration was more than 800 times the level that could cause cancer in humans who were continuously exposed.

A second major health-related concern of residents of areas of California where agriculture is especially important is drinking water quality. The concerns here cover a broad range of contaminants. Naturally occurring materials, such as radioactive isotopes of uranium, have been reported in drinking water in Hanford and Tulare.

Unsafe levels of nitrates have been repeatedly found in drinking water wells adjacent to areas of intense agricultural use. Both fertilizers and animal waste from dairies and poultry farms contribute to nitrate build-up. Communities as diverse as Oxnard and King City report nitrate levels in local drinking water that exceed California water quality standards. In the Salinas Valley alone, county health officials report that at least 1,500 agricultural wells may leak nitrates into the ground water supply.

The widespread presence of DBCP, a pesticide now banned in California, in San Joaquin Valley wells is well documented. Some 15 wells in the city of Fresno have already been shut down because DBCP levels exceed state safety levels. In late 1989, the Earlimart School District abandoned its small water system because of unacceptable levels of DBCP and in early 1990 the Richgrove school required its children to switch to bottled water because unsafe levels of DBCP were found in its wells.

A drought-related problem is the appearance of salt water that results from the increased reliance on groundwater pumping for irrigation in areas lacking surface supplies. Particularly in coastal areas - Pajaro Valley of

Santa Cruz County, Salinas Valley in Monterey County, and Oxnard Plain of Ventura County - there is substantial sea water intrusion appearing in local wells.

A third area of concern are urban-farmer conflicts that arise when increased housing development in predominantly agricultural areas bring residents into direct contact with normal farming practices. While most such conflicts involve individual home owners and a single farmer, the widespread controversy regarding malathion spraying to control Medflies may be viewed as a metaphor for this conflict. As agricultural areas become increasingly populated with urban-oriented residents, such conflicts are likely to increase both in number and in intensity. These conflicts will involve both farmers and farm workers. Recently, the city of Encinitas declared a "state of emergency" because the burgeoning migrant worker population, lacking housing, sleep in the city's canyons and ravines and are seen as a "homeless" threat to residents.

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4. Don Villarejo, How Much Is Enough?, California Institute for Rural Studies, Davis, CA, December 1986, p. 4.

5. Census of Agriculture, 1987, California, Volume 1, Part 5, U.S. Department of Commerce, Bureau of the Census, Washington, D.C., May 1989, See Table 7, p. 15. Compare this with How Much Is Enough?, op. cit.

6. California Agriculture, Statistical Bulletin, 1988, op. cit.

7. Census of Agriculture, 1987, United States, op. cit., p. 9. In part, this is due to the decline in wheat prices in 1987. However, the current rate of growth of nursery crop production is such that its value as a share of all U.S. crop production is doubling every ten years.

8. Census of Agriculture, 1987, United States, op. cit., State Data, Table 2, pp. 151-164.

9. Census of Agriculture, 1987, United States, op. cit., State Data, Table 2, pp. 151-164.

10. Census of Agriculture, 1987, United States, op. cit., State Data, Table 2, pp. 151-164. The total value of Wisconsin dairy production actually declined between 1982 and 1987 (due to the USDA dairy herd reduction program) while California's increased by about 8%.

11. Census of Agriculture, 1987, United States, op. cit., State Data, Table 1, p. 144.

12. Census of Agriculture, 1987, California, op. cit., State Data, Table 2, p. 9.

13. ibid.

14. ibid.

15. ibid.

16. ibid. Compare with Census of Agriculture, 1987, United States, op. cit., State Data, Table 2, pp. 151-164.

17. Census of Agriculture, 1987, California, op. cit., State Data, Table 1, p. 7.

18. This estimate is based on comparing the number of farm employers (SIC Codes 01, and 02 only) reported in Agricultural Employment, 1987, Report 882A, California Department of Employment Development, Sacramento, CA, 1988, with the number of farms reporting a direct-hire farm labor expense in Census of Agriculture, 1987, California. The difference refers to those farms that did not directly hire employees but which show a hired labor expense on their annual statement of income and expense. Farm management companies routinely prepare such statements of income and expense for the farms they manage.

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42. ibid.

43. Agricultural Employment Estimates, Report 881-X, State of California, Employment Development Department, Sacramento, CA, February 1990, p. 1. The annual average employment of "Hired Domestic" farm workers is reported to be 227,300 out of a total employment level of 285,000. This is 79.8% of the total.

44. ibid.

45. Agricultural Employment Estimates, Report 881-X, January 1977, State of California, Employment Development Department, Sacramento, CA.

46. Don Villarejo, Farm Restructuring and Employment in California Agriculture, Working Paper #1, Working Group on Farm Labor and Rural Poverty, California Institute for Rural Studies, Davis, CA, February 1989, p. 18.

47. Richard Mines and Philip L. Martin, A Profile of California Farmworkers, Giannini Information Series No. 86-2, Giannini Foundation of Agricultural Economics, Division of Agriculture and Natural Resources, University of California, July 1986.

48. ibid. p. 5.

49. ibid. p. 20 and p. 84.

50. ibid. p. 40.

51. ibid. p. 14.

52. New Migrants vs. Old Migrants: Alternative Labor Market Structures in the California Citrus Industry, Richard Mines and Ricardo Anzaldua, Monograph in U.S.-Mexican Studies, #9, Program in U.S.-Mexican Studies, University of California, San Diego, La Jolla, CA, 1982.

53. ibid.

54. California Labor Market Bulletin, State of California, Department of Employment Development, Sacramento, CA, monthly.

55. ibid.

56. Agricultural Employment, Report 882A, State of California, Employment Development Department, 1987-89, and unpublished reports for prior years; for non-agricultural employment and wages, see California Statistical Abstract, State of California, Department of Finance, Sacramento, CA 1989, for the period through 1988, and Department of Finance, private communication, for 1989 estimates.

57. ibid. Ratios calculated by the author.

58. Don Villarejo, Farm Restructuring and Employment in California Agriculture, op. cit. See p. 22.

59. Mines and Martin, op. cit., Table IV-7, p. 63. Grower direct-hire wages were found to average $210.50 per week while farm labor contractor wages averaged $166.98 per week.

60. Andrew J. Alvarado, Gary L. Riley and Herbert O. Mason, Agricultural Workers in Central California in 1989, Final Research Report, Center for Agricultural Business, California State University, Fresno, March 1990 (preliminary).

61. Metropolitan Area Fact Book, U.S. Department of Commerce, Bureau of the Census, Washington, D.C., 1984.

62. "Report on Social Conditions in the Rural Communities of the Most Agricultural Areas of the Sun Belt," Dean MacCannell, in Technology, Public Policy and the Changing Structure of American Agriculture, Background Papers, United States Congress Office of Technology Assessment, OTA F-285, Washington, D.C., 1986.

63. Final Report on the Structure of Agriculture and Social Conditions in Rural Communities, San Joaquin Drainage Study Area, Macrosocial Accounting Project, University of California, Davis, Dean MacCannell, Director, (to be published), U.S. Department of Interior, San Joaquin Valley Drainage Program, Sacramento, CA, October 8, 1987. See Table 2, Farm Size and Quality of Community Life.

64. ibid. Table 4.

65. Special run of the 1980 Census of Population data set for California, Jim Myers, University of California, Division of Agriculture and Natural Resources, private communication.

66. ibid.

67. ibid. For current data see California Statistical Abstract, State of California, Department of Finance, Sacramento, CA.

68. ibid.

69. ibid.

70. ibid.

71. "Community Data Tables," prepared for the San Joaquin Valley Program by Macrosocial Accounting Project, University of California, Davis, 1987, private communication.

72. Richard Mines and Michael Kearney, The Health of Tulare County Farmworkers: A Report of 1981 Survey and Ethnographic Research, Tulare County Department of Health, April 15, 1982. p. 87.

73. ibid.

74. ibid.

75. Michael Kearney and Carole Nagengast, Anthropological Perspectives on Transnational Communities in Rural California, Working Paper #3, Working Group on Farm Labor and Rural Poverty, California Institute for Rural Studies, Davis, CA, February 1989.

76. Richard Mines and Michael Kearney, The Health of Tulare County Farmworkers, op. cit.

77. Dr. Lynn R Goldman, State of California, Department of Health Services, Environmental Epidemiology and Toxicology Branch, private communication, June 4, 1990.

78. Selected Adverse Health Effects Complaints Attributed to Inhalation of Residues of DEF or Folex by Persons not Involved in the Application Process in the San Joaquin Valley of California 1974-1980, State of California, Department of Food and Agriculture, Division of Pest Management, Worker Health and Safety Unit, Sacramento, CA, 1981.

79. Margaret E. Scarborough, Richard G. Ames, Michael Lipsett and Richard J. Jackson, Acute Effects of Community Exposure to Cotton Defoliants, State of California, Department of Health Services, Office of Environmental Health Hazard Assessment, Hazard Evaluation Section, Berkeley, CA, March 1989.

80. "Use of Pesticide Suspended by CDFA," News Release No. 90-45, State of California, Department of Food and Agriculture, Sacramento, CA, April 13, 1990.

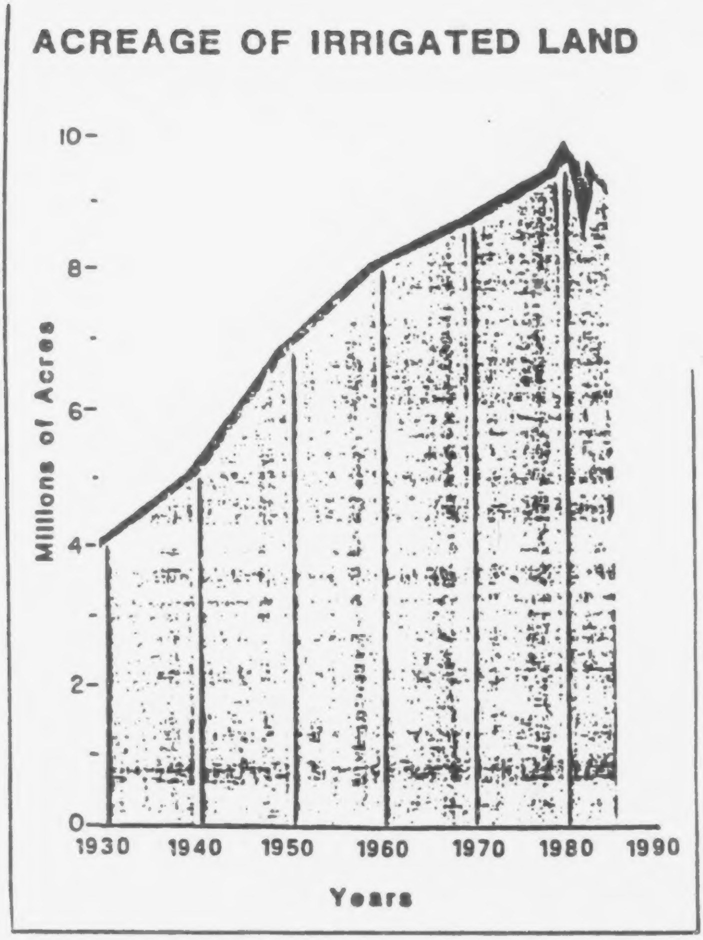

ACREAGE OF IRRIGATED LAND
10
8
6
4
2
0
Millions of Acres
1930
1940
1950
1960
1970
1980
1990
Years

Figure 1

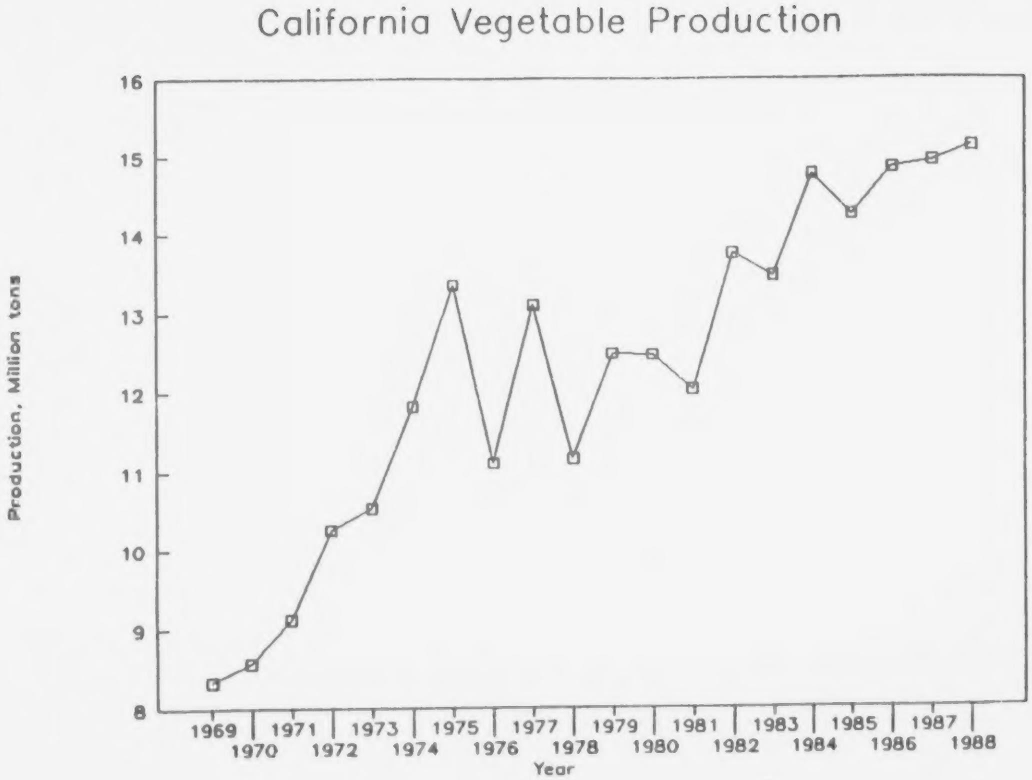

California Vegetable Production
Production, Million tons
16
15
14
13
12
11
10
9
8
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
Year

Figure 2

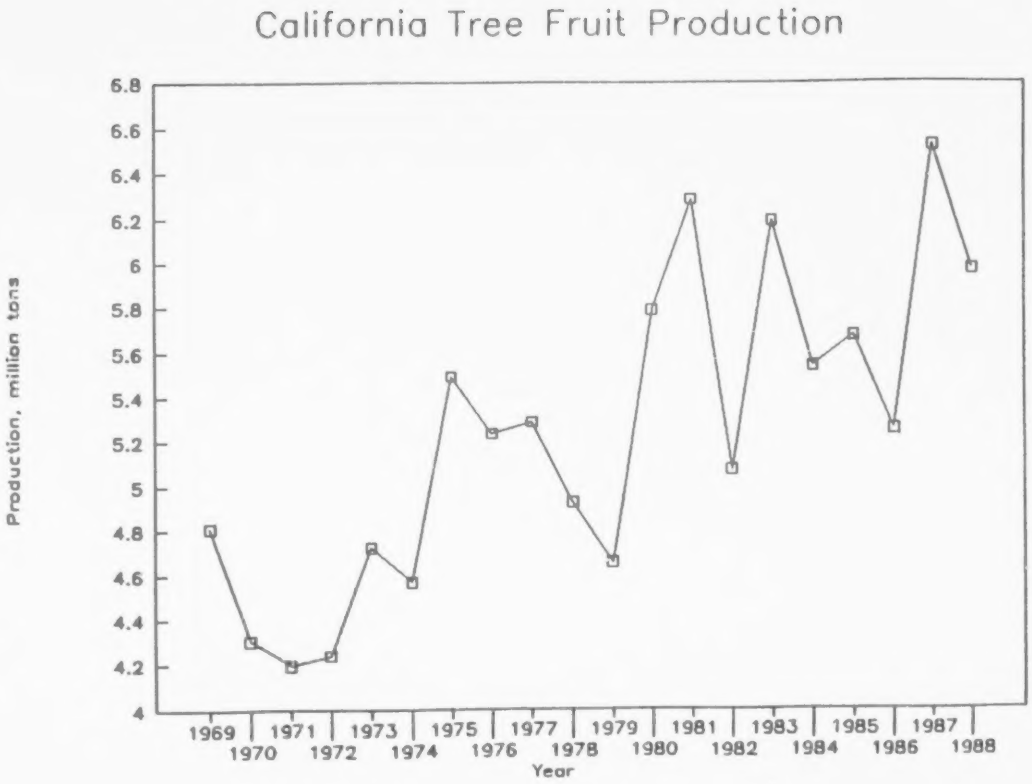
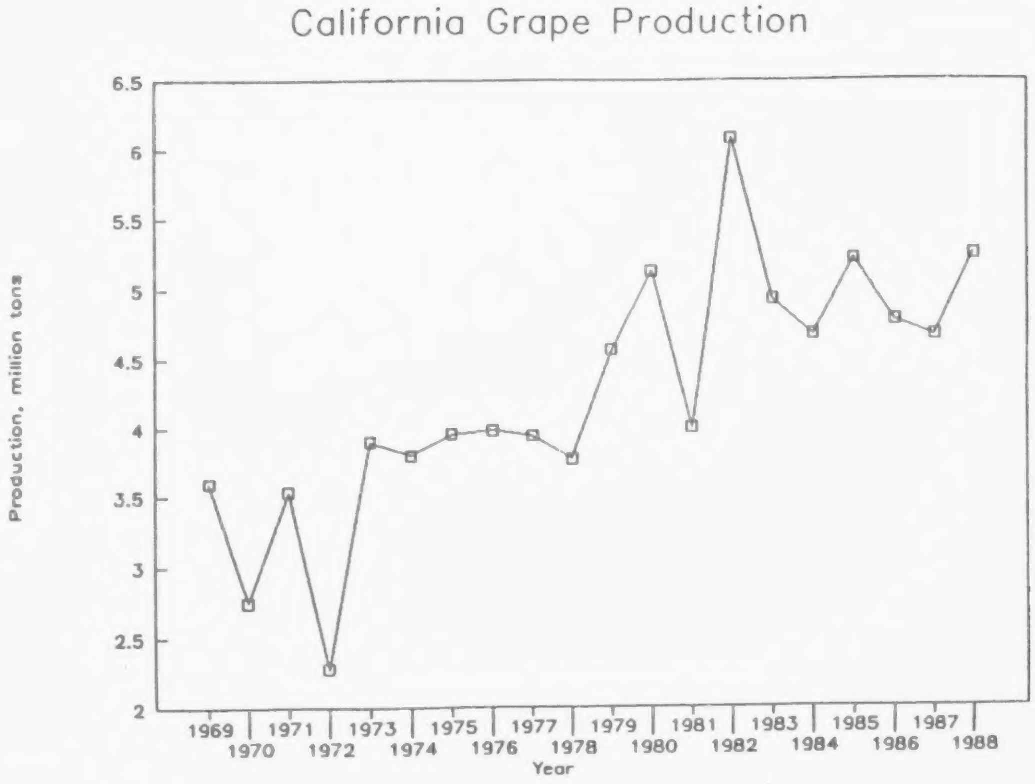

California Tree Fruit Production
Production, million tons
6.8
6.6
6.4
6.2
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
4
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
Year

Figure 3



California Grape Production

Figure 4

United States Crop Production, 1988

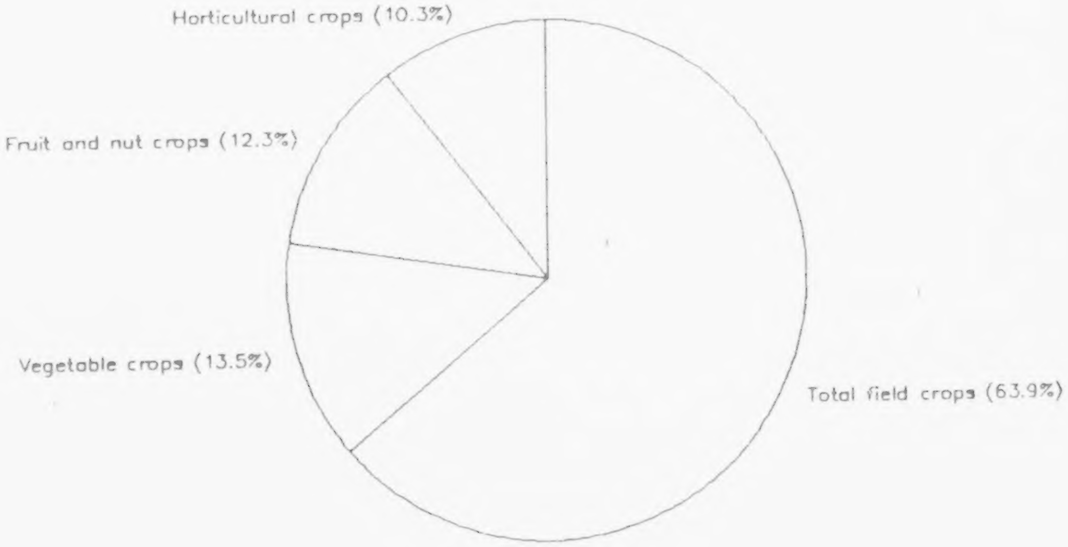


Figure 5

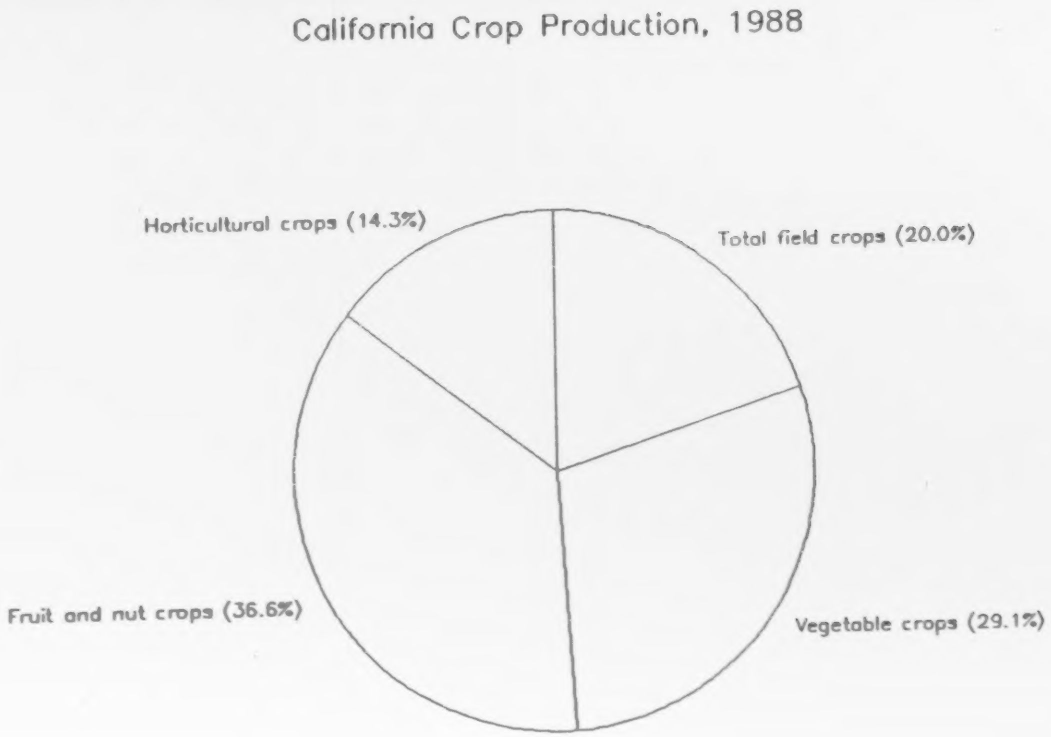

California Crop Production, 1988
Horticultural crops (14.3%)
Total field crops (20.0%)
Fruit and nut crops (36.6%)
Vegetable crops (29.1%)

Figure 6

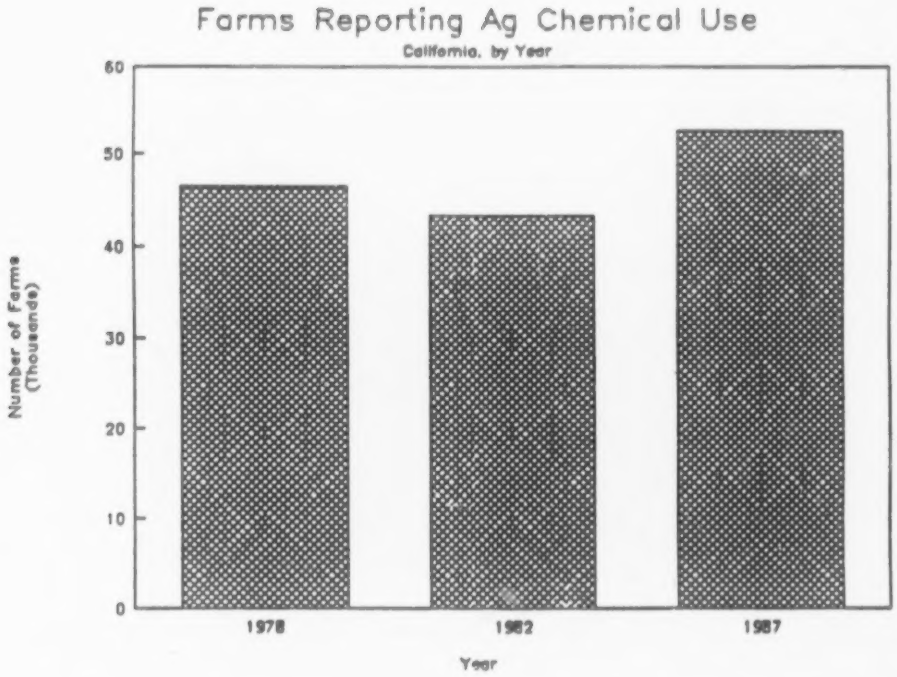

Farms Reporting Ag Chemical Use
California, by Year
Number of Farms (Thousands)
60
50
40
30
20
10
0
1978
1982
1987
Year

Figure 7

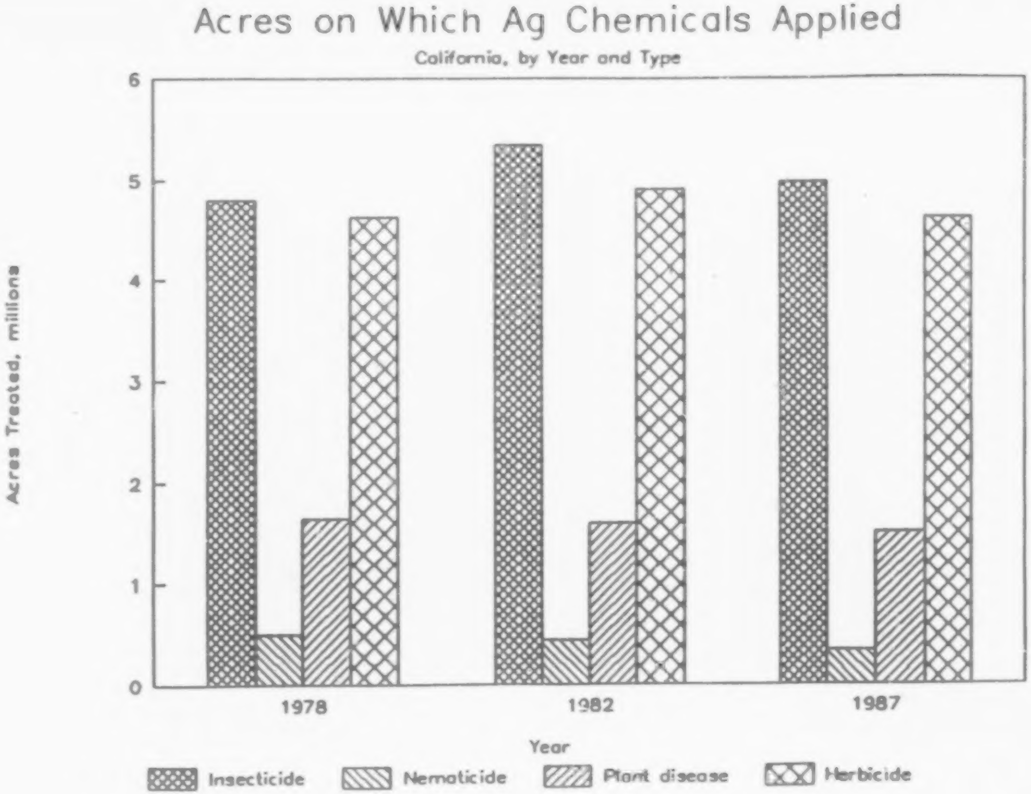

Acres on Which Ag Chemicals Applied
California, by Year and Type
Acres Treated, millions
0
1
2
3
4
5
6
1978
1982
1987
Year
Insecticide
Nematicide
Plant disease
Herbicide

Figure 8
40

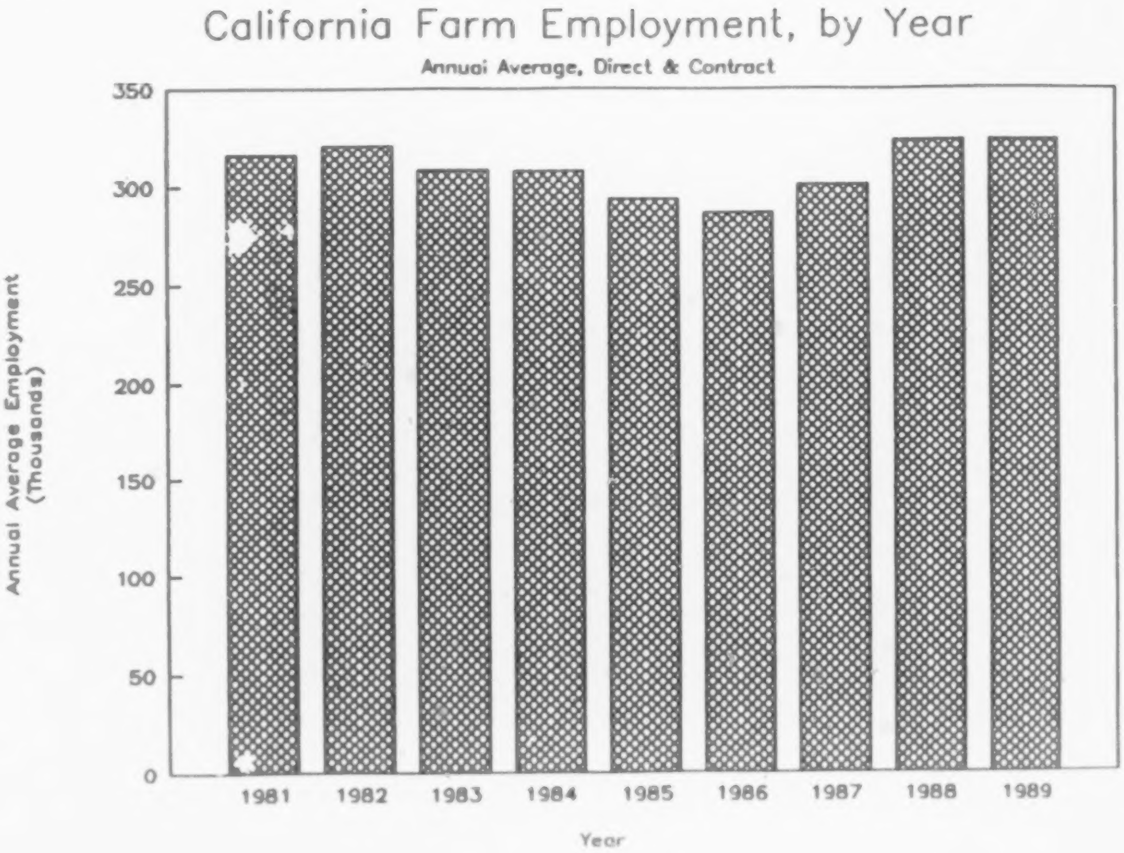

California Farm Employment, by Year
Annual Average, Direct & Contract
Annual Average Employment
(Thousands)
350
300
250
200
150
100
50
0
1981
1982
1983
1984
1985
1986
1987
1988
1989
Year

Figure 9

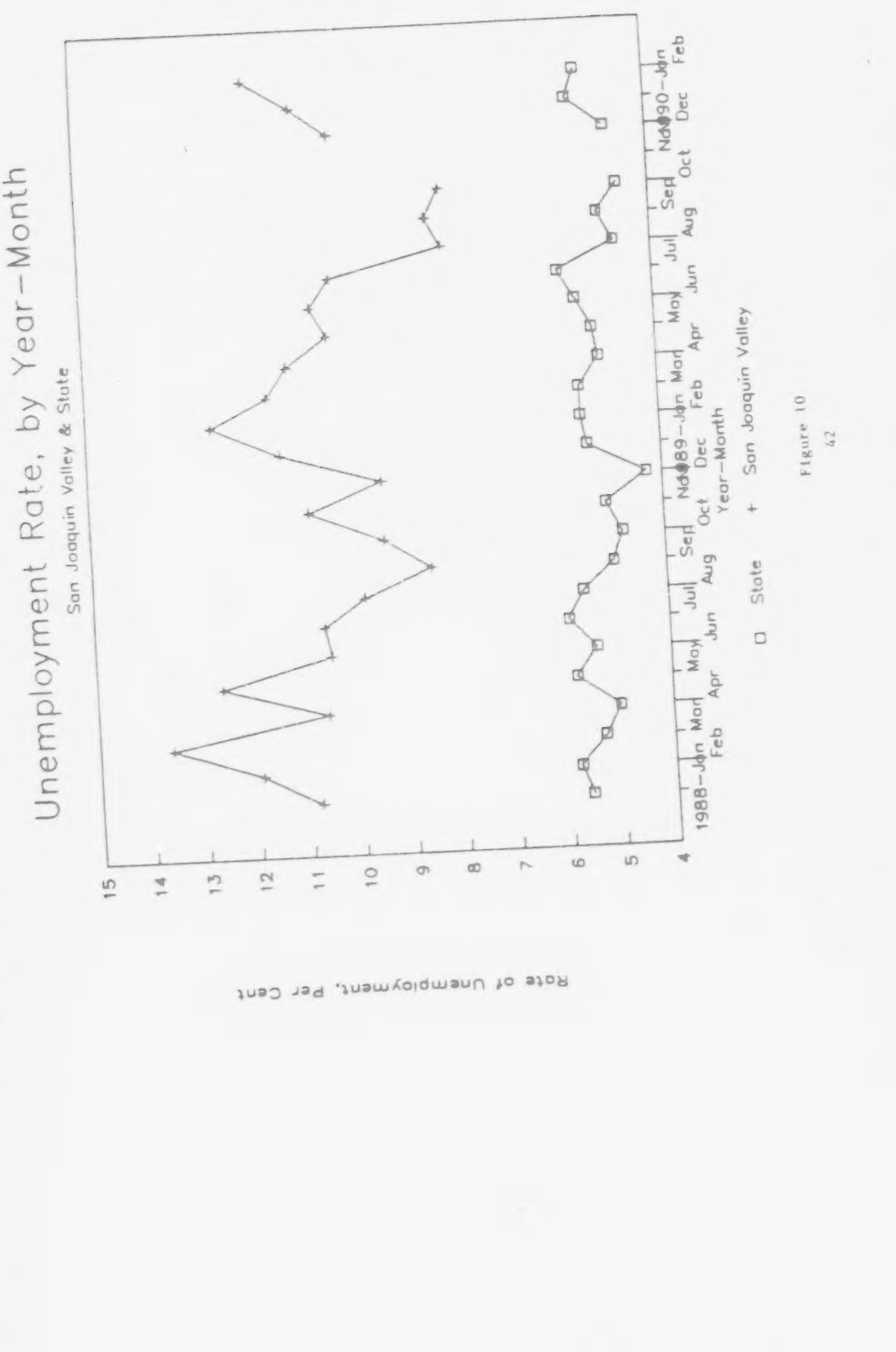

Unemployment Rate, by Year-Month
San Joaquin Valley & State
Rate of Unemployment, Per Cent
15
14
13
12
11
10
9
8
7
6
5
4
1988-Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1989-Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1990-Jan
Feb
Year-Month
□ State
+ San Joaquin Valley

Figure 10

42

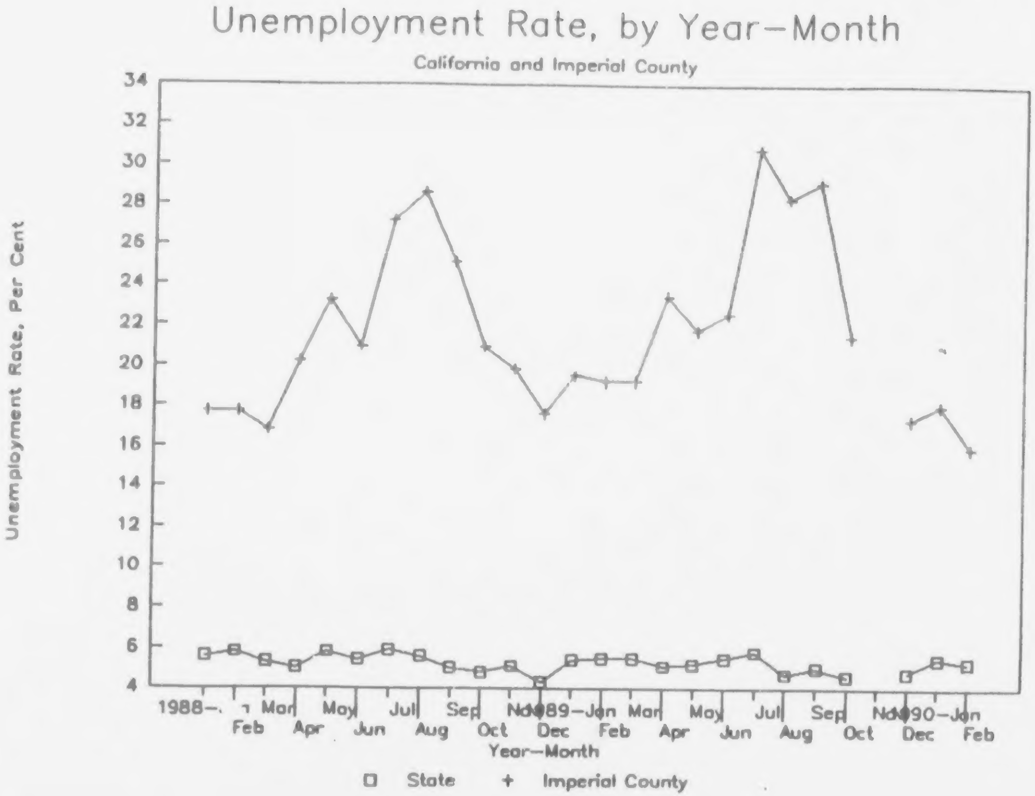

Unemployment Rate, by Year–Month
California and Imperial County
Unemployment Rate, Per Cent
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
1988–Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1989–Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1990–Jan
Feb
Year–Month
□ State
+ Imperial County

Figure 11

43

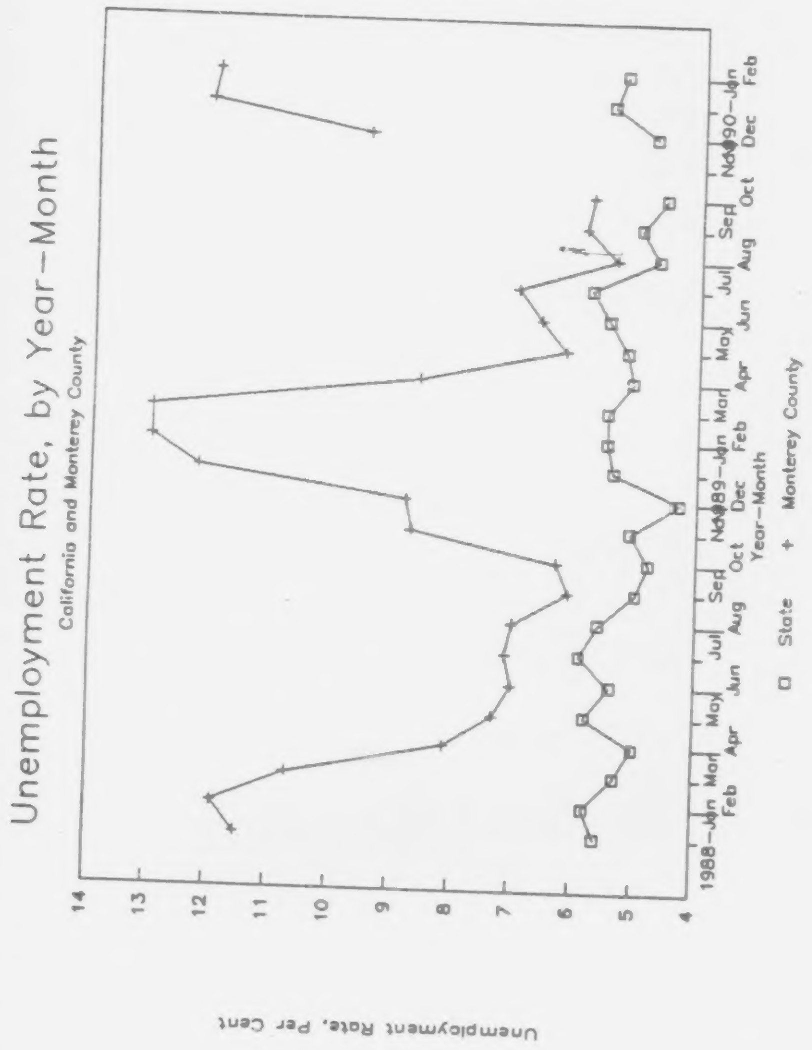
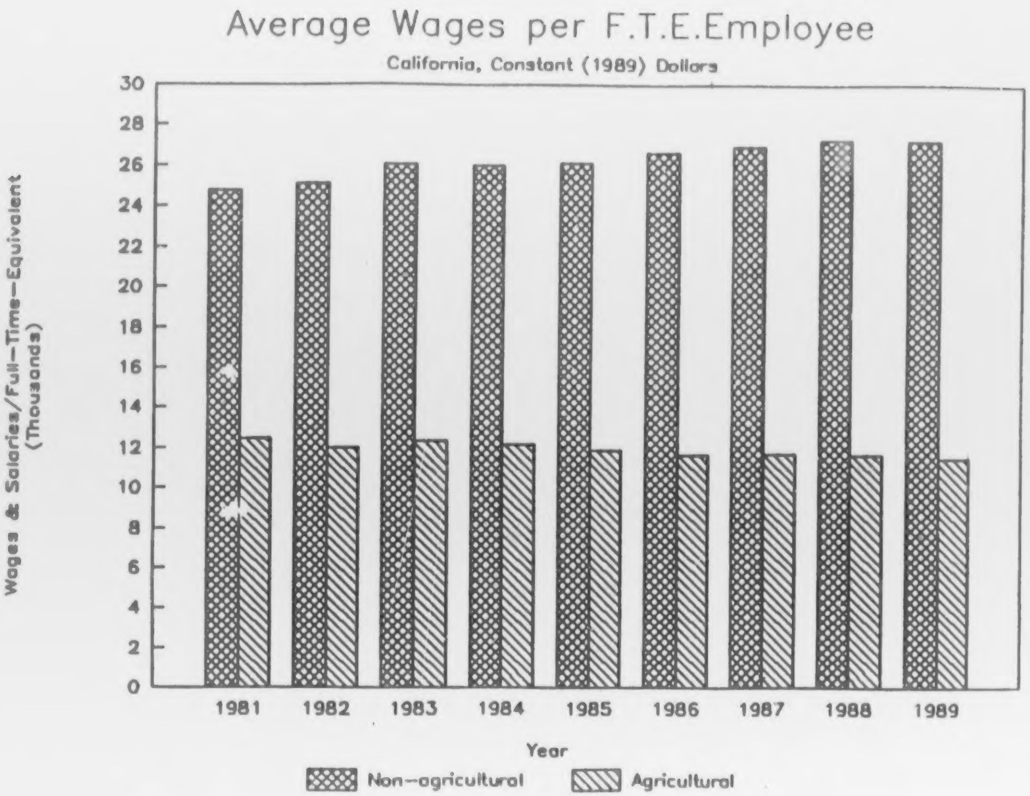

Unemployment Rate, by Year-Month
California and Monterey County
Unemployment Rate, Per Cent
14
13
12
11
10
9
8
7
6
5
4
1988-Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1989-Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
1990-Jan
Feb
Year-Month
□ State
+ Monterey County

Figure 12

44



Average Wages per F.T.E.Employee

California, Constant (1989) Dollars

Figure 13

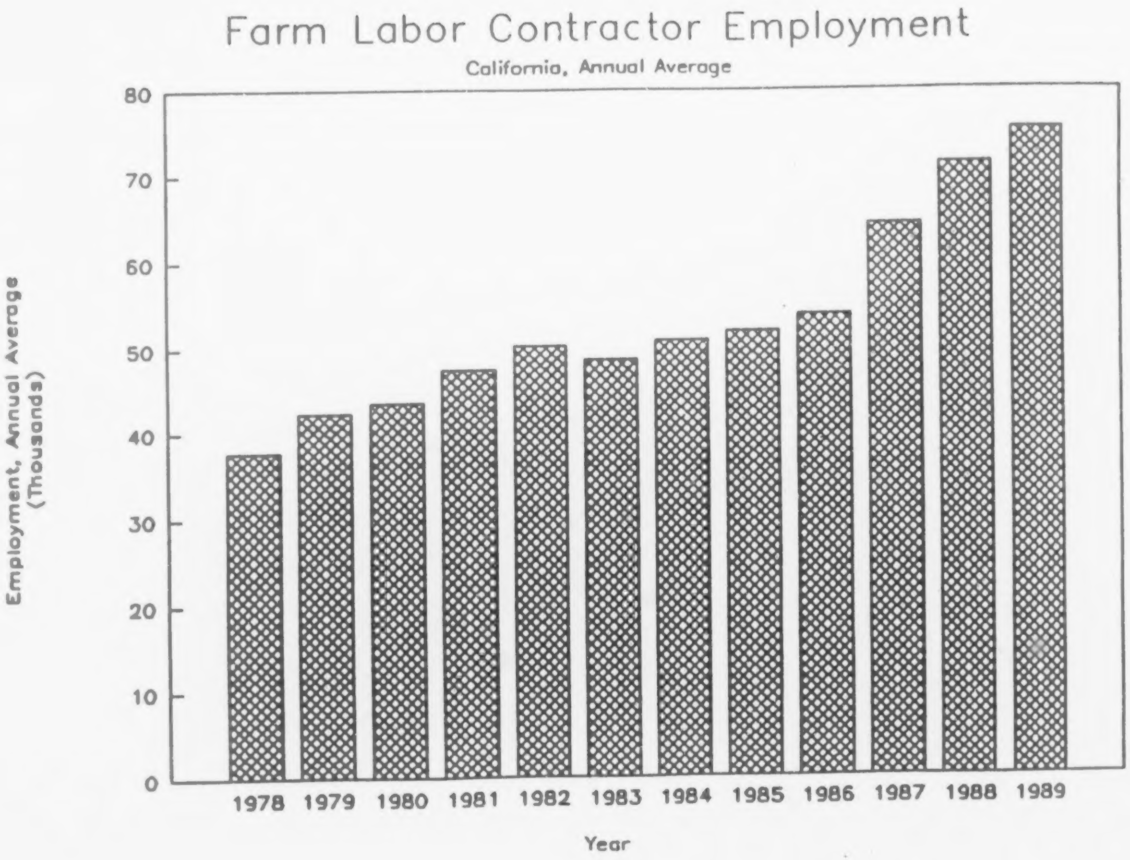

Farm Labor Contractor Employment
California, Annual Average
Employment, Annual Average
(Thousands)
80
70
60
50
40
30
20
10
0
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
Year

Figure 14

Latino Rural Settlements, 1980

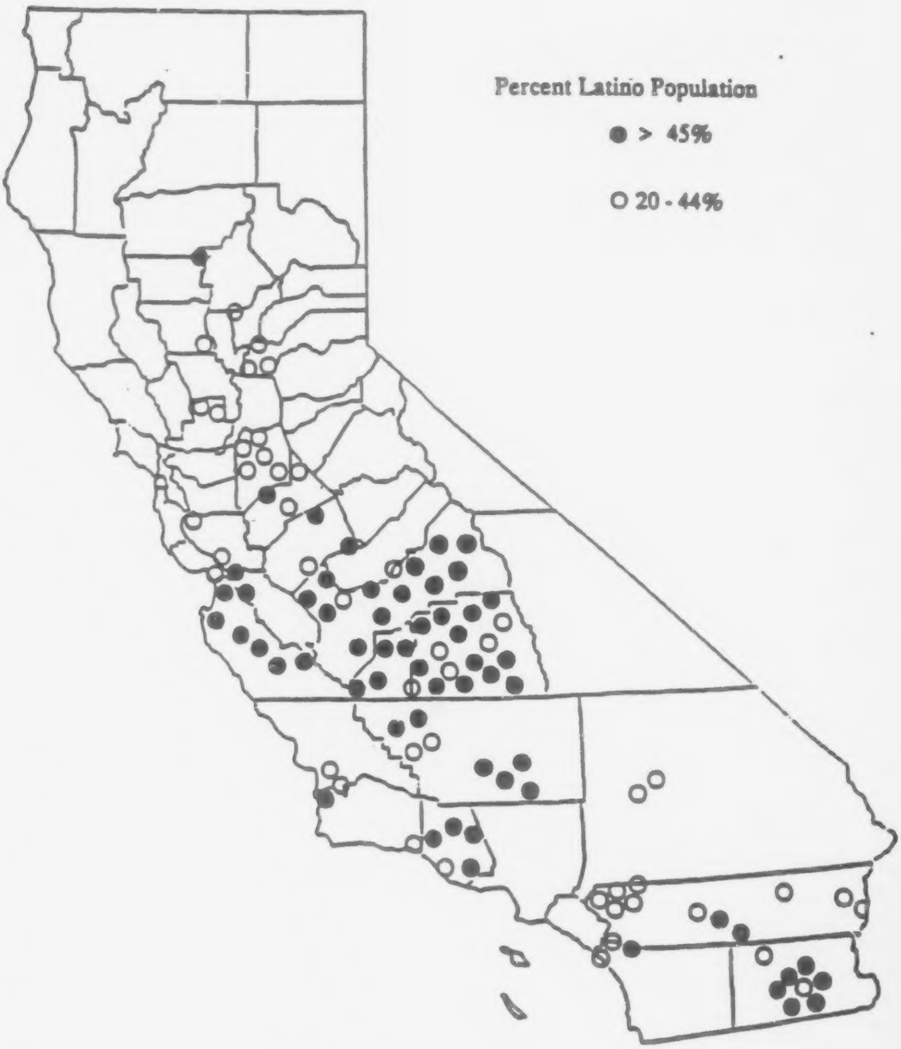

Percent Latino Population
● > 45%
○ 20 - 44%

Figure 15

APPENDIX I

California Agricultural Communities
Population 1980 to 1988

Area (County)	1980	1988	%change
CALIFORNIA	23667764	28314000	19.6
Arvin (Kern)	6863	8670	26.3
Avenal (Kings)	4137	7200	74.0
Blythe (Riverside)	6805	7980	17.3
Brawley (Imperial)	16326	18770	15.0
Calexico (Imperial)	14412	19400	34.6
Calipatria (Imperial)	2636	2940	11.5
Calistoga (Napa)	3879	4270	10.1
Chowchilla (Madera)	5122	5990	16.9
Coachella (Riverside)	9129	14150	55.0
Colusa (Colusa)	4075	4960	21.7
Corcoran (Kings)	6454	8530	32.2
Delano (Kern)	16491	20670	25.3
Dinuba (Tulare)	9907	11810	19.2
Dos Palos (Merced)	3120	4100	31.4
Exeter (Tulare)	5606	7100	26.7
Farmersville (Tulare)	5544	6190	11.7
Fillmore (Ventura)	9602	11320	17.9
Firebaugh (Fresno)	3740	4070	8.8
Gonzales (Monterey)	2891	4020	39.1
Greenfield (Monterey)	4181	6270	50.0
Gridley (Butte)	3982	4310	8.2
Guadalupe (Santa Barbara)	3629	5570	53.5
Gustine (Merced)	3142	3830	21.9
Hollister (San Benito)	11488	17580	53.0
Holtville (Imperial)	4399	4980	13.2
Hughson (Stanislaus)	2943	3170	7.7
Huron (Fresno)	2768	4050	46.3
Indio (Riverside)	21611	33140	53.3
Kerman (Fresno)	4002	4540	13.4
King City (Monterey)	5495	7560	37.6
Kingsburg (Fresno)	5115	6290	23.0
Lemoore (Kings)	8832	12580	42.4
Lindsay (Tulare)	6936	8180	17.9
Live Oak (Sutter)	3103	4000	28.9
Livingston (Merced)	5326	6820	28.1
Los Banos (Merced)	10341	13170	27.4
Madera (Madera)	21732	27530	26.7
Mcfarland (Kern)	5151	4000	-22.3
Mendota (Fresno)	5038	7230	43.5
Moorpark (Ventura)	7798	20470	162.5
Newman (Stanislaus)	2785	3420	22.8
Orange Cove (Fresno)	4026	4710	17.0

Area (County)	1980	1988	%change
Oxnard (Ventura)	110710	130080	17.5
Parlier (Fresno)	5714	7410	29.7
Patterson (Stanislaus)	3908	6630	69.7
Reedley (Fresno)	11504	14150	23.0
Ripon (San Joaquin)	3509	6930	97.5
Riverbank (Stanislaus)	5695	7600	33.5
Salinas (Monterey)	80479	101090	25.6
Sanger (Fresno)	12542	15200	21.2
Santa Paula (Ventura)	20650	23890	15.7
Santa Maria (Santa Barbara)	39685	52700	32.8
Selma (Fresno)	11555	14130	22.3
Shafter (Kern)	7010	7700	9.8
Soledad (Monterey)	5928	6720	13.4
St. Helena (Napa)	4898	4980	1.7
Wasco (Kern)	9613	11520	19.8
Waterford (Stanislaus)	2683	3270	21.9
Watsonville (Santa Cruz)	23660	29800	26.0
Winters (Yolo)	2652	3780	42.5
Woodlake (Tulare)	4343	5430	25.0

APPENDIX II

California Agricultural Communities
Per Capita Income 1979 to 1987

Area (County)	1979	1987	%change
CALIFORNIA	**$8294**	**$13197**	**59.1**
Agricultural Communities--Median	**$5236**	**$7297**	**28.9**
Arvin (Kern)	4195	5284	26.0
Avenal (Kings)	4940	6415	29.9
Blythe (Riverside)	5766	7567	31.2
Brawley (Imperial)	6123	7515	22.7
Calexico (Imperial)	3817	4420	15.8
Calipatria (Imperial)	4160	5095	22.5
Calistoga (Napa)	6891	9889	43.5
Chowchilla (Madera)	5718	7205	26.0
Coachella (Riverside)	3824	5181	35.5
Colusa (Colusa)	7008	9868	21.8
Corcoran (Kings)	5632	7262	28.9
Delano (Kern)	4888	5739	17.4
Dinuba (Tulare)	5081	6215	22.3
Dos Palos (Merced)	7352	8949	21.7
Exeter (Tulare)	6371	8250	29.5
Farmersville (Tulare)	3727	5011	34.5
Fillmore (Ventura)	6077	7967	31.1
Firebaugh (Fresno)	4482	6767	43.3
Gonzales (Monterey)	5322	7064	32.7
Greenfield (Monterey)	4620	5689	23.1
Gridley (Butte)	5505	7568	37.5
Guadalupe (Santa Barbara)	4303	6763	57.2
Gustine (Merced)	8013	10567	31.9
Hollister (San Benito)	5548	7955	43.4
Holtville (Imperial)	6150	7045	14.6
Hughson (Stanislaus)	5120	6454	26.1
Huron (Fresno)	3446	4602	11.6
Indio (Riverside)	5639	7347	30.3
Kerman (Fresno)	5777	7371	19.1
King City (Monterey)	6400	8405	31.3
Kingsburg (Fresno)	7326	10238	28.2
Lemoore (Kings)	6545	8978	37.2
Lindsay (Tulare)	5595	7297	30.4
Live Oak (Sutter)	5287	6041	14.3
Livingston (Merced)	4433	5139	15.9
Los Banos (Merced)	6306	8270	31.1
Madera (Madera)	5828	7417	27.3
Mcfarland (Kern)	3769	4305	14.2
Mendota (Fresno)	3457	4650	19.7
Moorpark (Ventura)	7071	10383	46.8

Area (County)	1979	1987	%change
Newman (Stanislaus)	6274	7470	19.1
Orange Cove (Fresno)	3526	5007	21.1
Oxnard (Ventura)	6247	9032	44.6
Parlier (Fresno)	2865	4616	34.2
Patterson (Stanislaus)	5730	7272	26.9
Reedley (Fresno)	5484	7414	23.4
Ripon (San Joaquin)	7161	9037	26.2
Riverbank (Stanislaus)	5333	7090	32.9
Salinas (Monterey)	6795	8852	30.3
Sanger (Fresno)	5354	7764	24.7
Santa Maria (Santa Barbara)	6507	9501	46.0
Santa Paula (Ventura)	6234	8529	36.8
Selma (Fresno)	5623	7688	24.8
Shafter (Kern)	5771	6941	20.3
Soledad (Monterey)	4220	5773	36.8
St. Helena (Napa)	8410	12401	47.5
Wasco (Kern)	5812	6646	14.3
Waterford (Stanislaus)	5085	7280	43.2
Watsonville (Santa Cruz)	6419	9234	43.9
Winters (Yolo)	6348	8814	38.8
Woodlake (Tulare)	3929	4983	26.8

PREPARED STATEMENT OF THOMAS N. CLARK, GENERAL MANAGER, KERN COUNTY WATER AGENCY

Thank you for inviting me here today to give you the agricultural perspective on your bill, S. 484, the Central Valley Project Improvement Act.

I am Tom Clark, general manager of the Kern County Water Agency (Agency), located in Bakersfield, California. The Agency is the largest agricultural contractor and second-largest municipal and industrial contractor in the State Water Project (SWP) with contracts in excess of 1.1 million acre-feet. In addition, six water districts within the Agency hold contracts for more than 400,000 acre-feet annually from the Friant Division of the Central Valley Project (CVP).

In my testimony today I am respectfully requesting that you not move your bill at this time to allow a consensus-building process already under way to solve the issues addressed in your bill.

While I am flattered to have been one of a limited number of agricultural interests selected to testify today, I must inform you that, as far and away the largest State Water Project agricultural contractor, I have a bias regarding your bill.

First, if large quantities of CVP water are dedicated to environmental purposes, the less chance there is that Kern County will lose its State Project supply to such purposes.

Second, if, as proposed by your bill, CVP water is dedicated to the environment and no replacement supply is made available to CVP contractors, tens of thousands of acres of land will go out of production in the CVP service area. Quite frankly, this would be good for farmers in Kern County's State project service area. Less acreage means higher crop prices and therefore, Kern County farmers would reap a bounty at the expense of our agricultural neighbors and the consumer.

What I have given you is the provincial point of view of what is good about your bill for Kern County's State Project farmers. Is this a reasonable position? The obvious answer is "no."

However, it is nevertheless illustrative of the extreme positions historically taken by the three major advocates in California water. Urban, environmental, and agricultural advocates have consistently exaggerated their needs and the detriments of certain actions with the belief that the legislation, litigated outcome or negotiated settlement will be favorable to their constituencies. California's water wars have become a way of life ad reflect the importance of water resources in our State.

More recently however a large number of the advocates of these three groups have come together with the realization that the water war is a failed strategy. While each group has won and lost numerous battles, the war is never won and ultimately, California is the loser.

The name of this group is the "agricultural-environmental-urban group" and its membership includes more than 50 representatives of the three major interests. A steering committee of 18 has been charged with the responsibility to negotiate major water issues. Shown on exhibit A to my testimony is the steering committee and major water issues that are on the table.

Although we believe it is very significant that these three interests have come together in an attempt to develop reasonable solutions to our water problems, the only way this group can be credible is by cutting through the fluff and quickly dealing with issues of substance. To this end, we have established a 90-day deadline, commencing February 1, 1991, for the steering committee to have a framework of agreement on the major issues shown on Exhibit A. To date, the steering committee has made good progress, particularly with respect to environmental guarantees for the Sacramento-San Joaquin Delta. We're beginning to see that no one has to lose. The challenge is not to find a way to give water to one sector regardless of the impacts on other sectors. The challenge is to responsibly meet the reasonable needs of all the users.

Senator, if you would find it helpful in your legislative effort, I can make a request of the membership to form a subcommittee to come to Washington to brief you more specifically on the issues and possible solutions we are developing.

As I read S. 484, your basic objective is to promote and expand the authorized purposes of the CVP to provide additional water for environmental mitigation and enhancement. The bill also seeks to satisfy urban needs through a one-time sale of 100,000 acre-feet to the highest bidder and transfers of agricultural water to urban areas. The bill provides for no new facilities to increase CVP supplies by specifically (Sec. 8(i)) not authorizing construction of water storage facilities.

I understand the desire and need to correct past environmental injustices of the CVP and to provide water for a rapidly growing population. However, I disagree with the method by which S. 484 attempts to deal with the problem. Through the combination of contract restrictions, agricultural transfers and failure to provide additional facilities, almost the entire burden of expanded environmental and urban water requirements will fall on CVP agricultural contractors. Urban areas can avoid sharing in mitigation and actually increase their supplies by merely outbidding other cities for the 100,000 acre-feet or through a purchase of agricultural supplies.

The overall effect of S. 484 is to create grave uncertainty, not only about existing CVP water rights, but about what actions are to be taken to achieve the purposes of the bill. This uncertainty, coupled with the provision allowing citizens to sue, practically guarantees an endless stream of litigation that will throw the entire CVP system into chaos for years. In the end, CVP water management and operations policy would be determined by the courts, and all of our consensus-building efforts will be blocked.

S. 484, if enacted in its present form, would create the same kind of result of the traditional water wars that we have worked so hard to get away from.

This is why I ask you not to move your bill at this time, and instead work with us on our consensus-building efforts. These efforts involve not only Agricultural-Environmental-Urban Group I mentioned earlier, but include Governor Pete Wilson and his administration and numerous local, statewide and federal agencies.

So if S. 484 in its present form is not the answer, what is? I believe, as many others do, the answer to California's water problems will come through a combination of actions at the State and Federal levels. Some of these actions, such as agricultural and urban conservation and reclamation and, under certain conditions, agricultural water transfers, are contained in S. 484. However, S. 484 does not include other actions such as surface and groundwater conjunctive use, development of needed Delta facilities, and hands-on management of environmental water supplies.

I believe you will find that through this process of creative problem solving by agricultural, environmental, and urban interests, the legitimate water needs of a growing urban population, a healthy environment and a stable agricultural economy can be met. Give us a chance to solve our fish and wildlife problems while meeting the needs of our cities, our farms, and our industries. We will need your help to implement those solutions when we reach consensus, and we would like to work with you to develop legislation reflecting that consensus.

I sincerely appreciate your coming to California to hear our views. Thank you.

[Exhibit A]

AGRICULTURE-ENVIRONMENTAL-URBAN GROUP

STEERING COMMITTEE MEMBERS

Jerald Butchert, Westlands Water District
Carl Boronkay/Duane Georgeson, Metropolitan Water District of Southern California
Hamilton Candee/Karen Garrison, Natural Resources Defense Council
Robert Clark, Glenn-Colusa Irrigation District
Thomas Clark, Kern County Water Agency
David Fullerton, Consultant/Sierra Club
Thomas Graff, Environmental Defense Fund
Stephen Hall, Consultant/California Farm Water Coalition
Lyle Hoag, Consultant/California Urban Water Agencies
Gerald Meral, Planning and Conservation League
B.J. Miller, Consultant
Andy Moran, City of San Francisco
Jason Peltier, Central Valley Project Water Association
David Schuster, Consultant/State Water Contractors
Ed Seegmiller, Contra Costa Water District
Lester Snow, San Diego Water Authority
Gregory Thomas, National Heritage Institute
Bill Yeates, Pacific Coast Federation of Fishermens' Associations

DRAFT FRAMEWORK OF AGREEMENT

Bay-Delta Environmental Guarantees
Environmental Water Authority
Wetlands Program
Water Facilities
Other Projects
Urban Water Conservation
Agricultural Water Conservation
Ag-to-Urban Transfers
Measures to Address Regulatory/Permit Constraints on New Facilities
Reliability of Future Urban and Agricultural Water Supply

DIMENSIONAL FUND ADVISORS INC.,
Santa Monica, CA, March 13, 1991.

Subcommittee on Water and Power,
Senate Committee on Energy and Natural Resources, U.S. Senate, Washington, DC.

TO WHOM IT MAY CONCERN: At the suggestion of Senator Bradley, enclosed please find comments my wife Suzanne and I have written about the distribution of federal water supplies in California. I look forward to attending the March 18th hearing.

Sincerely,

DAVID G. BOOTH, *Chairman.*

[Enclosure.]

THE DISTRIBUTION OF FEDERAL WATER SUPPLIES

Most of the discussion about the distribution of water supplies focuses on who gets the rights to the water. More attention needs to be placed on the transferability of those rights.

One principle of free markets is that regardless of the initial assignment of property rights, property (of any type) will eventually be owned by those for whom it has the highest value. If home owners have a better use for the water than farmers, but farmers are assigned the rights to the water, home owners will buy the water from the farmers.

It is good public policy to allow a market to develop for trading property rights to water. Such a market would naturally develop if the owners of water rights were allowed to sell their rights. Commodities exchanges are organized to trade all types of commodities, from wheat to frozen pork bellies. Water rights would be easy to trade.

The Government should allow for the trading of water rights. If rights are transferable, the assignment of water rights becomes less important. The errors in assignment are correctable in the open market. Water users that were assigned too little water can buy more in the open market.

The assignability of property rights can be the fairest solution for the poor. To see this, suppose all of the water rights are given to the poor. Once their basic needs are met, they would soon entertain bids for their remaining rights. The net effect would be that water rights would transfer to those in more need of water.

The price of water in a commodity contract would be higher than the price currently charged by utilities. The economic burden of this can be adjusted in the initial assignment of rights. The first 50 gallons per capita could be sold at a low price, with the price escalating rapidly above that level.

The Government could capture the economic rents from the sales of water rights by auctioning off the rights directly. It could invest the proceeds in desalinization plants. In any event, by allowing a secondary market to develop to trade water rights, it would maximize the likelihood that water is used in the most socially useful manner.

March 18, 1991.

Hon. BILL BRADLEY,
Subcommittee on Water and Power, U.S. Senate, 364 Dirksen Senate Office Building, Washington, DC.

DEAR BILL: Please consider this letter to be my testimony in connection with the March 18, 1991 hearing conducted by the Subcommittee on Water and Power relating to S. 484, the "Central Valley Project Improvement Act." I very much appreciate the opportunity to provide you and the Subcommittee with my comments.

At the outset, let me make clear that the purpose of S. 484—to improve the water-related environment within the Central Valley Project—is one with which few can quarrel. The protection, restoration and enhancement of fish and wildlife resources are important goals for California and the nation, and therefore must be diligently pursued.

However, those goals must be pursued reasonably and in a manner which recognizes the importance of balancing all legitimate interests. Unfortunately, as currently drafted, S. 484 places the sole burden of the protection, restoration and enhancement of the fish and wildlife resources affected by the Central Valley Project on agriculture. As the owner of agricultural land serviced by the Central Valley Project, I must strongly object to the approach of S. 484, and urge you and the Subcommittee to work closely and openly with agricultural interests to accommodate their needs. To do otherwise could cost those of us with agricultural holdings billions of dollars, and would unfairly dismantle the enormous and vital agricultural economy which has been developed around the Central Valley Project.

Although many aspects of S. 484 are extremely troubling, I will limit my comments to a few of its most disturbing provisions. First, the bill provides that the Central Valley Project is to henceforth be operated so as to "protect, restore and enhance fish, wildlife and related habitat affected by the Project" and to provide "equitable treatment" for fish, wildlife and related habitat with the other primary purposes of the Central Valley Project. These provisions are so broad that the Central Valley Project would, in effect, be committed to nothing but fish and wildlife purposes, to the great detriment of all other users who have made enormous investments in reliance on the Project. It seems fundamentally unfair that facilities which were constructed for one purpose should suddenly be devoted to another use.

Further, virtually all habitat in California could be considered to be "affected" by the Central Valley Project, as well as by numerous other state and local water projects. Although other provisions of the bill speak to mitigating only the effects of the construction and operation of the Central Valley Project, the bill's broader language would seem to swallow up the bill's specific language. In effect, S. 484 makes the recipients of federal water supplies in California responsible for restoration of virtually the entire water-related environment throughout California. Is it fair that the entire burden of addressing environmental issues throughout the State should be borne solely by growers relying on Central Valley Project supplies when countless other projects have also had a significant impact on habitat in the State?

S. 484 also imposes an indefinite prohibition on the renewal of water service contracts throughout the Central Valley Project until the fish and wildlife restoration goals described in the bill are met, unless contractors are willing to accept significant reductions in their supplies. This flat prohibition on contract renewals would make water supplies "year-to-year" in the Central Valley Project, thereby creating untold uncertainty.

Uncertain water supplies can be devastating to farmers. Lenders become reluctant to provide affordable long-term financing for agricultural property if long-term water supplies are not assured; the unavailability of affordable financing drives down property values, which makes financing even more difficult to obtain. If left unchecked, this downward spiral continues through the entire agricultural economy.

We have already witnessed this phenomenon in the Friant Division of the Central Valley Project, where my holdings are located. As you are no doubt aware, the Friant Division water service contracts are currently expiring and subject to renewal. Controversy has surrounded the renewal of Friant Division contracts, resulting in delays and uncertainty in the renewal process. That uncertainty has impacted the local economies; a flat prohibition on renewals could be devastating.

S. 484 also seeks to remove barriers to voluntary water transfers. However, it imposes a 25% "tax" on transfers, which will in fact act as a disincentive. If transfers are to occur, the price will reflect this "tax" and cause water to be sold to the highest bidder, which will in almost all situations be urban areas. Agriculture simply cannot compete in a "price war" for water, and I urge you to consider whether the nation's best interests are served by a policy that sells water only to the buyer with the greatest economic resources.

Contrary to popular belief, the areas served by the Central Valley Project are water short, and must rely on an already overdrafted groundwater basin to make up shortfalls in surface supplies. One likely result of stripping Central Valley Project water from agriculture will be an increase in groundwater pumping in those areas where groundwater is available. Your bill requires the metering of all groundwater extractions within the boundaries of all Central Valley Project contractors. While S. 484 does not explain the rationale for requiring meters, one can only assume that your bill is intended to begin the process of federal regulation of groundwater. This seems inconsistent with the federal government's repeated statements that groundwater is purely a matter of state law.

Finally, funding for your bill comes largely from additional charges to Central Valley Project water users, at the rate of $30 million per year. California agriculture simply cannot afford an additional surcharge of this magnitude. As noted above, balancing the entire restoration effort within the Central Valley Project on the back of growers is simply not realistic or fair.

In summary, despite its noble ambitions, S. 484 is fundamentally flawed and inequitable. It fails to recognize the legitimate needs of California agriculture (which provides the affordable food and fiber consumed in the United States, as well as contributing significantly to reducing the nation's trade deficit), and could cause economic chaos within California.

Restoration of environmental values is not necessarily inconsistent with agriculture. Cooperation with agriculture is both possible and necessary. Accordingly, I urge you to work openly and fairly with California farmers to develop the needed amendments to S. 484 in order to ensure that fish and wildlife restoration can proceed side-by-side with agriculture in California. If you and the Subcommittee are willing to work with California's farmers with an open mind, great things can be accomplished. Any other approach is destined to lead to disaster.

If you would like to discuss my concerns in more detail, please feel free to contact me.

Very truly yours,

ABNER GRESHLER.

PREPARED STATEMENT OF THE PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS

CITIES AND FISH ARE VICTIMS OF FEDERAL WATER PROJECT—U.S. SENATE PANEL TOLD

Los Angeles, March 18—Fish and wildlife are being destroyed and cities are being denied dependable water sources as a result of the operations of the federal Central Valley Project, a U.S. Senate Subcommittee meeting in Los Angeles today was told.

The 50-year old Central Valley Project (CVP) controls over 20 percent of California's water, delivering most of it at subsidized rates to agriculture in the arid Central Valley. And, much of that, the Senate panel was told, goes to irrigate water consumptive and/or low value crops such as cotton, rice, alfalfa and irrigated pasture land. Those four crops use half of the 85 percent of California's water used by agriculture while accounting for only 15 percent of the state's farm value.

"The history of the CVP, as with much of California's water development, has been a reallocation of water from in-stream uses for fish and wildlife to out-of-stream purposes. This has not been without a cost. King salmon have been lost to king cotton. The economies of the north coast have fallen victim to the profiteering of the agribusiness giants of the San Joaquin Valley . The fish and wildlife, the salmon fishermen and Indians, Los Angeles water rate payers and U.S. taxpayers are paying for the Rolls-Royces and Beverly Hills mansions of the cotton growers and desert land developers, and the CVP has been the conduit for the transfer of that wealth", Nat Bingham told the Senate Subcommittee.

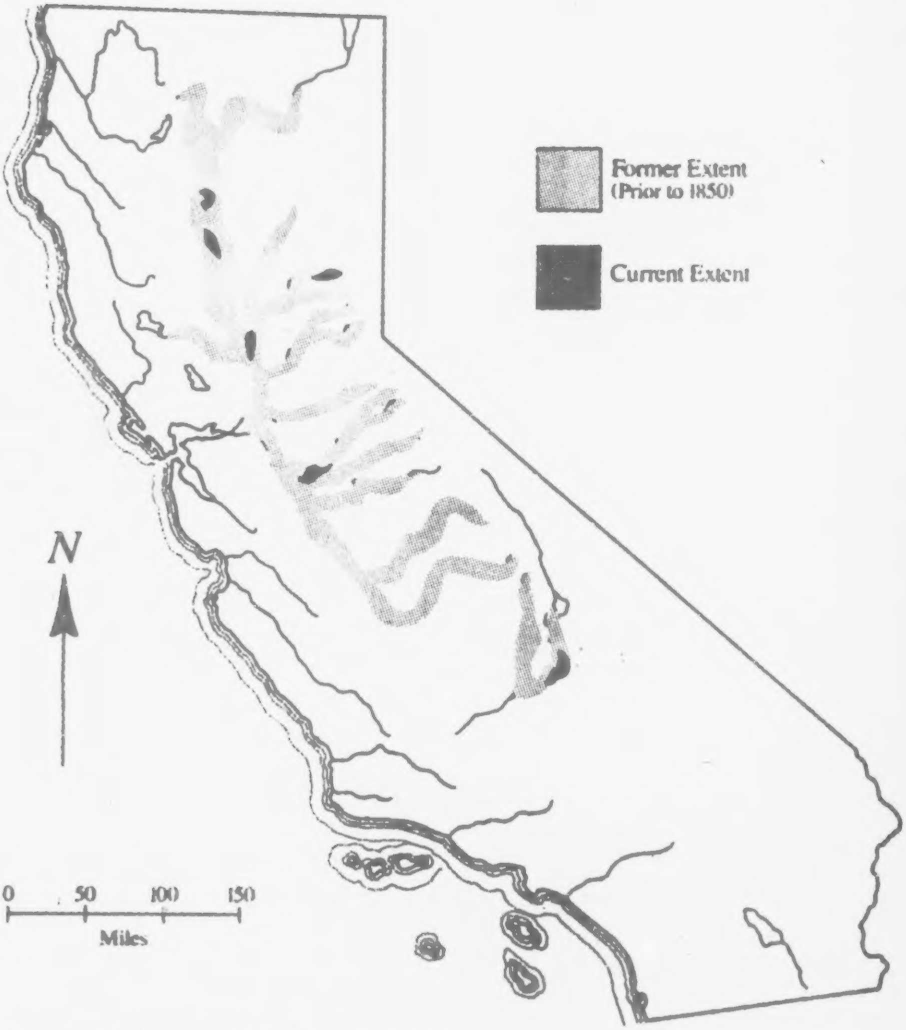
Bingham, a salmon fisherman from Mendocino, is president of the Pacific Coast Federation of Fishermen's Associations (PCFFA), the largest commercial fishing organization on the U.S. west coast.

His statement and nine pages of written testimony was presented to the U.S. Senate Subcommittee on Water and Power, chaired by Senator Bill Bradley. The New Jersey Democrat is the author of S. 484, "The Central Valley Project Improvement Act", which was the subject of today's field hearing in Los Angeles.

The Bradley bill would make fish and wildlife conservation a co-equal purpose of the CVP and allow for transfers of CVP water from low-value agricultural production to municipalities. A similar measure has been introduced in the House by California Congressman George Miller (D-Martinez).

Bingham described the destruction done to the state's salmon fishery by the Department of Interior's CVP. Salmon, which was California's most valuable fishery as late as 1988, has declined drastically during the drought due to excessive pumping by the Bureau to supply its agricultural customers. Bingham said there may not even be a salmon season this year on the north coast and a highly-restricted season along the rest of the state's coast. He called for a reallocation of some of the CVP water to go for fish and wildlife purposes and provide municipalities, some facing 50 percent cutbacks, a firm supply.

Riparian Woodland in the Central Valley of California


▨ Former Extent (Prior to 1850)
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Source: California Natural Diversity Data Bank, 1980

The Nature Conservancy

California Field Office
785 Market Street, San Francisco, California 94103
(415) 777-0487 — FAX (415) 777-0244

California Riparian Fact Sheet

Case Study: the Sacramento River

- In the last 150 years, agriculture and urbanization have reduced the present riparian habitat of the Sacramento River to less than 5% of the original acreage.

- Of the 800,000 acres of riparian forest that used to line the Sacramento River, only 12,000 acres remain.

- In a process known as riprapping, more than 42-miles of the Sacramento riverbank has been stripped of trees and shrubs and lined with rock to thwart erosion.

- More than 65 major dams interrupt the flow of the Sacramento.
  Shasta Dam, completed by the end of WWII, cut the salmon spawning grounds in half and encouraged landowners downstream to cut forests and develop farmland closer to the river.

- Of the 100,000 breeding pairs of Western yellow-billed cuckoos that once thrived along the rivers of California, today the Sacramento River is home to the second largest concentration of cuckoos--54 birds.

- Each year more than 100,000 winter-run chinook salmon return to the Sacramento to spawn. In 1990 when only 547 winter-run chinook salmon were seen struggling to get up the undersized fish ladders to their natural spawning grounds, they were declared an endangered species.

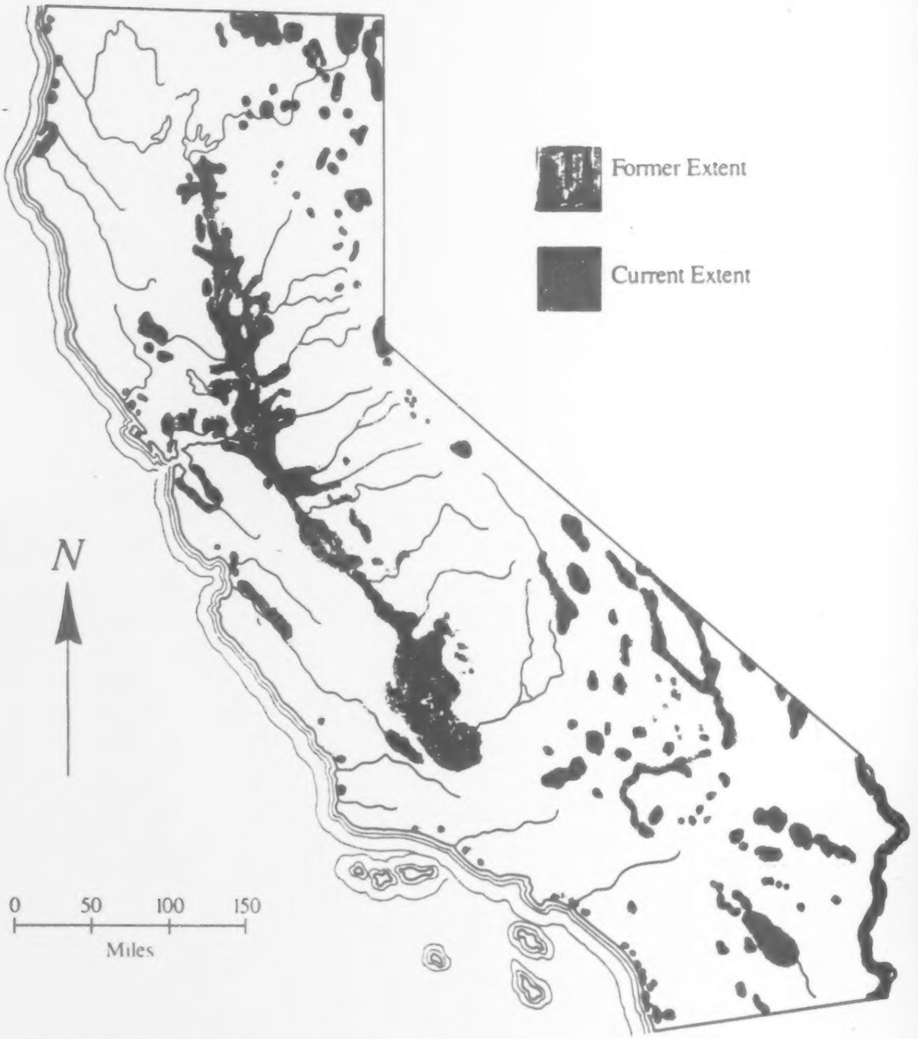
- Species faced with extinction on the Sacramento River:
  - -Western yellow-billed cuckoo
  - -bald eagle
  - -Swainson's hawk
  - -Least Bell's vireo
  - -bank swallow
  - -California hibiscus

- Species that exist nowhere else on earth:
  - -winter-run chinook salmon
  - -Delta smelt
  - -Suisun song sparrow

Western Regional Office, 785 Market Street, San Francisco, CA 94103
National Office, 1815 North Lynn Street, Arlington, Virginia 22209

Recycled Paper

California Waterscape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California Field Office
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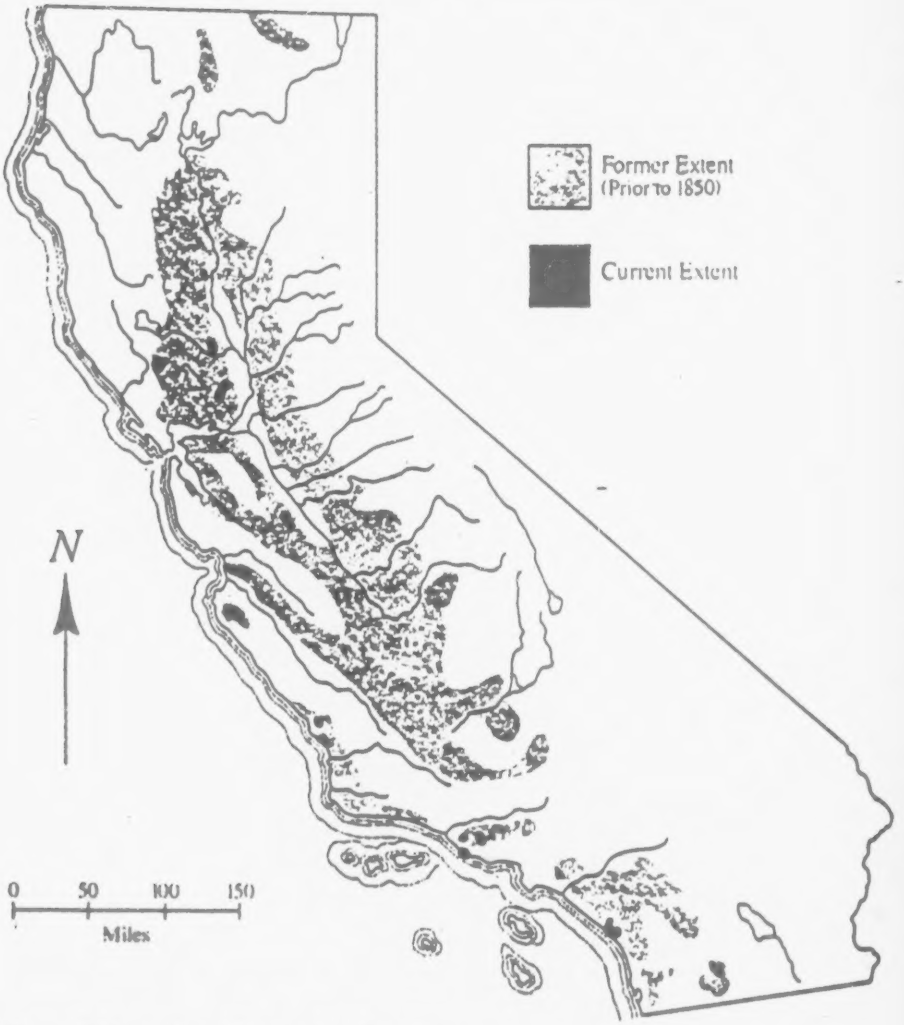
CALIFORNIA WETLANDS FACT SHEET

- 91% of California wetlands have been destroyed. 96% of Central Valley wetlands have been destroyed.
- In the past 200 years, California has lost over five million acres of wetlands. Over four of those five million wetland acres once occurred entirely in the Central Valley.
- Of the 300,000 acres of wetlands remaining in the Central Valley, few are in their native state.
- Of some 14 million wild ducks and geese that funnel down the Pacific Flyway, 60% winter in the wetlands of California's Central Valley.
- From 1976 to 1987, waterfowl numbers in California dropped by nearly five million, the lowest level since surveys began in 1955. The primary reason for this reduction was habitat loss.
- The value of wetlands:
  - waterfowl, wading birds, and hundreds of other wildlife species, including many endangered species, live in wetlands
  - commercial and recreational fish and shellfish rely on wetlands during some phase of their lifecycles
  - wetlands plants improve water quality and can even treat municipal wastewater by trapping and removing pollutants
  - wetlands absorb floodwaters and reduce the damages caused by flooding
  - wetlands can recharge groundwater supplies
  - wetlands support numerous outdoor recreational activities
- In the U.S., nearly 500,000 acres of wetlands are lost each year.
- Each day in North America, some 1,200 acres of wetlands are drained in the name of "progress".

Central Valley Grassland



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Source: California Natural Diversity Data Bank, 1980

Executive Summary of the Report:

Sliding Toward Extinction

The State of California's Natural Heritage, 1987

SUSAN MIDDLETON

The San Joaquin kit fox is in trouble. It is "living on the edge." It is just one of the 220 animals, 600 species of plants and 200 natural communities that may be threatened with severe reduction, or even extinction in California. The loss of this natural diversity is becoming one of the leading political, social, economic and scientific issues of our times.

Introduction

The purpose of this report is to assess the status of natural diversity in California and to inform the people of the state that biotic destruction is accelerating and may soon reach a crisis point. Decisive action is needed now to protect the habitats and species that are sliding toward extinction.

California's threatened and endangered species are indicators of the state's environmental health. The quality of natural habitats is ultimately tied to the health of all Californians.

Millions of acres of native grasslands, tidal marshes, vernal pools, oak and redwood forests have already been lost. In the pursuit of food, shelter, livelihood and pleasure, Californians have eliminated and altered a significant proportion of the state's wildlands.

The issue is how to balance the needs and activity of a rapidly increasing human population — 33 million predicted by the year 2000 — with protection for the state's unique and exhaustible natural resources. Steps can be taken now to ensure that California's irreplaceable biological diversity survives in ways that sustain both the state's rich natural heritage and its economy. If we wait, conflicts will only accelerate.

San Joaquin Valley kit fox

Sliding Towards Extinction

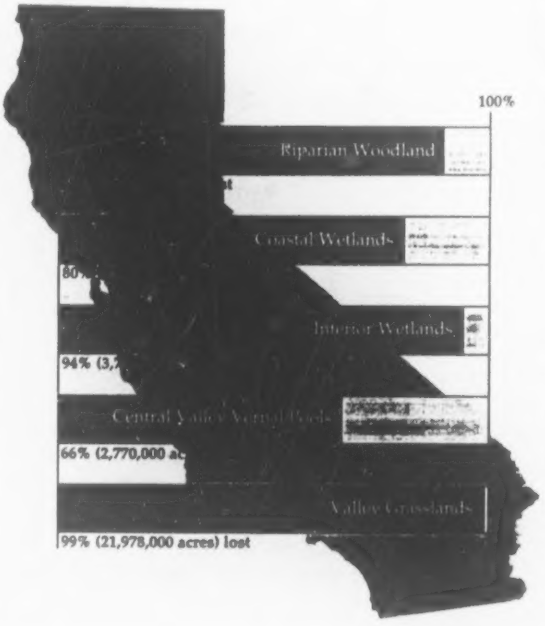
The State of California's Natural Heritage, 1987

This publication is an **Executive Summary** of the full report prepared by **Jones and Stokes Associates, Inc.**, Sacramento, CA at the request of the California Senate Committee on Natural Resources and Wildlife.

The report was commissioned by **The California Nature Conservancy**. November, 1987. Copies of the full report are available from the Conservancy at 785 Market Street
San Francisco, CA 94103
(415) 777-0487.

All animals and plants depicted in this summary are endangered, threatened or rare in California.

Estimated Losses of Certain Habitats Since the Early 1800s



California's Biological Richness

What Do We Have?

California has an astonishing variety of animals and plants, more than any other state in the continental United States. California has more plant species than the entire central and northeastern U.S. and adjacent Canada combined.

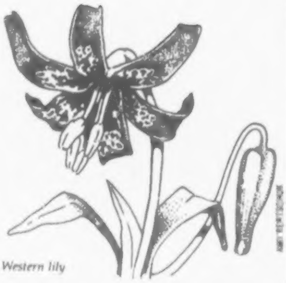
There are 748 species of vertebrate animals in California. Of these, 38 percent of the freshwater fish, 29 percent of the amphibians and 9 percent of the mammals are endemic — ***they are found nowhere else in the world.***

More than 550 bird species have been recorded in the state; over half of these breed here.

Almost 5,200 species of native plants grow within the boundaries of California and nearly one-third of these *do not occur outside the state.*

California supports 380 distinct natural communities, assemblages of plants and animals. Familiar examples of the important ecosystems include redwood forests, Joshua tree woodlands, coastal sage scrub, vernal pools, valley oak riparian forests, Sierran trout streams, wet mountain meadows, coastal salt marshes and kelp beds.

The rarest of California's plants, animals and natural communities are inventoried and monitored by the California Department of Fish and Game (DFG's) California Natural Diversity Data Base. This data base can help to continuously assess the state of California's diversity.



Western lily

California's Biological Richness

What is Gone? What Are We Losing?

Loss of habitat due to human activity is the most direct cause of species extinctions and endangerment.

At least 24 species and 10 unique subspecies, including 16 vertebrate animals and 18 invertebrates have already been eliminated in California. Many of these species or subspecies occurred only in California. They are lost forever.

Half of California's terrestrial communities and 40 percent of its aquatic communities are rare or threatened.

Some examples dramatically illustrate the situation:

Nearly a quarter of the state was once covered with original perennial **Grasslands**— purple needle grass, blue wildrye, pine bluegrass, deergrass and a multitude of wildflowers. Today a tiny fraction remains — perhaps only one tenth of one percent. This represents one of the greatest losses of indigenous natural diversity in America.

Coastal Wetlands have an extremely high value, as one of the most biologically productive ecosystems. They provide fish and wildlife habitat, sediment trapping, waste assimilation, storm and floodwater storage, shoreline protection, and recreational and educational opportunities. Most of these wetlands have been filled, dredged or diked and converted to farms, pastures, harbors, cities and garbage dumps. Eighty percent have been lost.

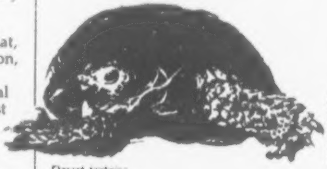
The mountains, hills and valleys of California contain tens of thousands of miles of rivers, streams and sloughs. Their banks support Riparian Woodlands — one of the richest wildlife habitats in the state. In the 1800's the great river systems of the Sacramento and San Joaquin Valleys supported nearly a million acres of riparian woodland. Today at most, 102,000 acres, or 11 percent remains of the habitat; much has been severely degraded. Less than one percent of the Central Valley's riparian vegetation is in natural high quality condition.

As many as four million acres of **Interior Wetlands** once occurred in the Central Valley. This vast area supported an unimaginable abundance and variety of wildlife — tule elk, pronghorn, mule deer, grizzly bears, wading birds, furbearers, reptiles, amphibians and huge numbers of breeding and wintering wildfowl. Today less than four percent remains.

Oak Woodlands have declined in acreage and quality substantially under pressures of agricultural conversion, cutting for fuel, livestock grazing, urbanization, road and freeway construction. In various combinations these are the same pressures that threaten most of California's wild habitats.

More than any other oak woodland type, the **Valley Oak** habitat has been impacted by agricultural conversion. Valley oak woodlands, once miles wide, have been largely reduced to a scattering of giant, relict trees remaining on the immediate riverbanks and as shade trees around farmhouses and parks.

The **California Condor** is gone from the wilds. Remaining birds are kept in captivity in hope that they will breed and permit eventual reintroduction to the wild. The great bird's habitat, however, is rapidly dwindling, casting grave doubts as to the feasibility of future survival upon release.



SUSAN MIDDLETON

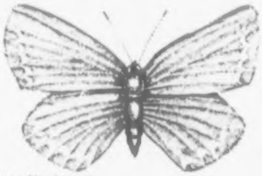
Desert tortoise

Both **Elk** and **Pronghorn** are estimated as having numbered over 500,000 prior to European settlement in California. Both were decimated by 1900. Today small numbers are being managed and protected. **Bighorn Sheep** were always rare; probably no more than 10,000 were in the state. They were reduced and locally eliminated in many areas by the 1920's. However, through protection, reintroduction and careful management, these animals have made a recovery and now number about 5000.

The **San Joaquin Kit Fox** once occupied the San Joaquin Valley and areas of Monterey, Santa Clara and Santa Barbara counties. By 1975 the total kit fox population had been reduced by nearly half and was estimated at 7,000. The greatest threat to the kit fox is the continued loss of habitat to agricultural, urban, industrial, energy and mineral development.

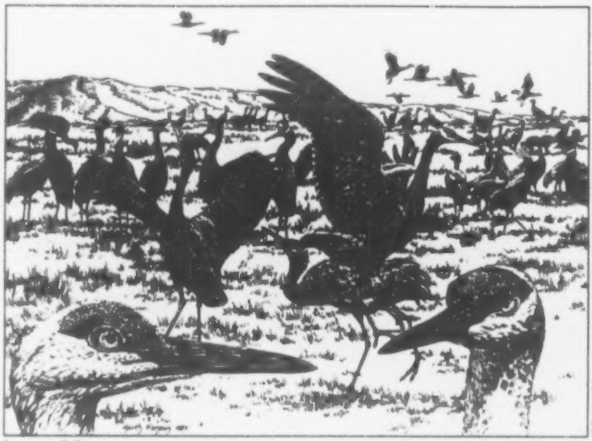
About 10 percent of native mammals, 17 percent of native reptiles and amphibians, and 27 percent of freshwater fish are listed by the state or federal governments as threatened or endangered species. However many more plants and animals that have been severely reduced and are greatly at risk have not yet been officially listed.

Adding the potentially threatened or endangered species to those listed, we find a third of California's mammals, a quarter of the birds, a third of the reptiles and amphibian species, and 40 percent of the freshwater fish species, plus 12 percent of California's native plants (tree, shrub and wildflower species) are all imperiled if current trends continue. These statistics are greatly disturbing to scientists, resource managers and the public as a whole.



AMY PERTSCHUK

Lotus blue butterfly



KEITH HANSEN

Lesser sandhill cranes

Why Does it Matter?

Extinction is irreversible. No way exists to reconstitute a species once all of its individuals have vanished.

Globally, species extinctions and habitat losses are occurring at rates that are orders of magnitude greater than ever before; evidence is overwhelming that rates of extinction on earth today are far greater than at any time in the last 70 million years. The net result is a severe loss of natural diversity.

The most obvious value of natural diversity results from the material resources provided by certain species. Worldwide, thousands of plant and animal species provide food, drink, fuel and energy, fabrics, medicines, building materials and industrial products. Medicines derived from naturally evolved plant compounds provide the most striking examples of human dependence on biological diversity.

For example, relatives of the endangered Antioch Dunes evening primrose manufacture compounds which may be helpful to patients with coronary heart disease. The seeds of the Bakers' meadowfoam contain an oil whose viscosity is sought after for industrial uses. The majority of grapes in agricultural production in the world are grafted onto root stocks of the native grape species, *Vitus californicus*, because of its resistance to disease.

Also, extremely valuable are the "ecological services" provided by diverse natural communities. These services include protection of watersheds and floodplains, moderation of climate, abatement of water and air pollution, biological control of pest populations, and maintenance of habitat for wild pollinators of agricultural crops.

Maintaining ecological services through protection of natural ecosystems is very inexpensive compared to the technological alternatives. Technologies to control floods, abate pollution, and control pests are expensive, hazardous, and often ineffective. They can have far-reaching adverse side effects. And there simply are no technological alternatives for moderating climate or improving disease resistance for our crops.

How is Diversity Protected?

Natural diversity is protected through laws and regulations and through ownership and management of land.

Federal laws preserve habitat diversity in three ways. Some permit or require the acquisition and management of important habitats. Others, such as the Endangered Species Act, protect species from destruction. Finally, protection of habitat diversity is a benefit of laws requiring consideration of general environmental quality goals.

However, federal protection is limited. For the most part, federal laws apply only to actions that occur on federal lands, to federally funded projects on private lands or to projects that require federal permits. The Endangered Species Act does extend to species found on private lands.

California has a well-developed program for protecting environmental resources, compared to most states. However, some laws and programs are not being fully implemented by public agencies due to inadequate funding. Another major inadequacy is the weakness of legal protection for critical biological resources from private actions on private lands. There is a lack of state protection, beyond the California Environmental Quality Act requirements for protection of unlisted species and critically endangered habitats.

Bighorn sheep

TUPPER ANSEL BLAKE

Bluegrass

CRAIG LATKER

Who Owns the Land?

Ownership and management of land plays a major role in protection or lack of protection of rare species and habitats.

All Californians share in the ownership of almost half of the land in California through public agencies. Public lands in California encompass about 45 percent of the state. This includes about 11.5 million acres managed largely for the preservation of outstanding natural landscapes or significant biological resources.

Public lands supporting sensitive species and natural communities should be managed primarily for the protection of these resources. Most agencies responsible for these sites have policies requiring protection of special elements of natural diversity. They need strong support and encouragement to resolve management conflicts that threaten sensitive elements of diversity.

Because of historical patterns of settlement, most public land and protected areas are in rugged mountains or desert areas. Habitats in many fertile and accessible lowland places are in private ownership and have been widely eliminated through intensive land use.

Private lands account for 55.7 million acres or 55 percent of the state. On the whole, natural diversity on private lands has suffered because many private land uses do not generally consider management objectives for multiple use, sustainable yield and the protection of natural diversity.

Private lands supporting important populations of sensitive plant and animal species that may be detrimentally affected by private land uses should receive highest acquisition priority. State and federal agencies and private institutions should continue to acquire lands through existing programs. Bond acts and legislative appropriations that would provide land acquisition funding deserve strong support.

The growing conflict between economic expansion and ecological equilibrium in California must be addressed with clear legislative and management policies along with substantial funding for acquisition of lands to protect California's diversity.

Amargosa pupfish

CAROL MORTENSEN

SUSAN MIDDLETON

San Francisco garter snake

What is to be Done?

Action is needed to meet the state's immediate and long-term needs for maintaining natural diversity. The following recommendations should be implemented through a combined effort by the California Legislature, state and federal agencies, and private organizations to ensure protection of California's remaining natural diversity. We suggest this list as a starting point for protection efforts; we expect that these recommendations may elicit other specific ideas for needed actions.

1. Increase Habitat Acquisition. State, federal, and private programs must be expanded and accelerated to identify and acquire unique, natural communities and habitats supporting rare, threatened, and endangered species.

2. Increase Environmental Review Capabilities of Agencies. Staffing is insufficient for adequate agency participation in the environmental review processes required under California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA).

3. Accelerate the Process for Listing State and Federal Endangered Species. Many species designated as state and federal candidates warrant listing as threatened or endangered under the state and federal acts, but remain unprotected. Increased scientific and administrative effort is needed to accelerate the evaluation of species' statuses and to process the legal documentation required to list species under the acts.

4. Expand the Scope of the California Endangered Species Act. Currently the state endangered species act does not preclude harming of state-listed threatened or endangered plant species by a landowner. The act only provides protection of the habitats of listed plants and animals on state lands or within projects sponsored or approved by state agencies. As a result, listed plant species, and habitats of both plants and animals, are being eliminated legally on private lands. Provisions need to be added to the Act to ensure protection of all listed species and their habitats, as is the case with the federal Act.

5. Protect Instream Water Flow. California's water laws should be amended to recognize protection of instream stream flows as a beneficial use of water that is competitive with existing appropriative uses.

6. Encourage Habitat Protection in Tax and Other Incentive Programs. Legislation is needed to provide tax benefits to individuals who protect rare habitats and species.

7. Develop Incentive Programs for Landowner Creation of Important Habitats. The California Legislature has resolved that the state's wetland acreage should be increased by 50% by the year 2000. To help achieve this goal, tax and other incentive programs should be developed to reward landowners for the creation of new permanent or temporary wetlands and to increase other important habitats.

SUSAN MIDDLETON

San Joaquin antelope squirrel

8. Establish Legal Protection for Rare Natural Communities. The rarest and most threatened natural communities in California should be given legal protections similar to those now given legally designated rare, threatened, and endangered species and wetland plant communities.

9. Increase Control of Non-native Plants and Animals. Laws should be passed to prohibit or control the sale and use of highly invasive exotic plants (e.g., French broom, tamarisk, and pampas grass) that frequently escape from cultivation, displace native plants, and degrade wildlife habitat.

10. Review Effectiveness of Existing Laws and Regulations to Protect Diversity. A thorough review of existing laws and regulations is warranted to determine: 1) the extent to which current laws protect threatened and endangered species and rare natural communities, 2) the effectiveness of agency regulations in interpreting, implementing, and enforcing these laws, and 3) compliance by agencies and private individuals with laws and regulations. This review may lead to proposals for new legal protections or specific agency reforms to assure that the legislative intent to protect biological resources is achieved.

11. Evaluate Laws and Programs Detrimental to Biological Resources. A detailed review should be conducted of existing laws and programs that adversely impact biological resources.

12. Evaluate Compliance and Effectiveness of Mitigation Measures Adopted Under CEQA and NEPA. A systematic study is needed to evaluate the extent to which adopted mitigation measures are being implemented and to determine their effectiveness in preventing or minimizing impacts to biological resources. It should identify legislative actions or administrative procedures needed to achieve the protections originally intended in environmental laws.

CRAIG LATKER

Antioch Dunes evening primrose

13. Prepare Periodic Reviews of the Status of Natural Diversity in California. The California Endangered Species Act requires that the Department of Fish and Game prepare an annual status report on all state-listed threatened, endangered, and candidate species and that each threatened and endangered species be reviewed in detail every 5 years. The status report should be expanded to discuss candidate species, species of special concern, and rare habitats. A comprehensive evaluation of the status of natural diversity in California should also be prepared periodically (at least once every 5 years) for the governor and the legislature.

14. Include Status of California's Natural Heritage in Governor's Annual State of State Report. The environmental health of California should have a prominent place in the Governor's annual assessment of the state.

Although significant efforts have been made to protect biological resources in California, much of California's extraordinary natural diversity remains threatened. Californians must work more vigorously to prevent the continuing loss of biological diversity.

Cooperative efforts on the part of lawmakers, scientists, planners, landowners, developers, business people, educators, and concerned citizens are essential to this effort. Success will require the hard work, creativity, and commitment of all involved. Future generations of Californians will measure their esteem for us largely by the degree to which we succeed in this important task.

Numbers of Natural Communities in California That are Rare or Threatened

Type of Community	Percent of Communities Rare or Threatened	Total Number of Communities Recognized*	Number of Rare or Threatened Communities
Marsh	100	14	14
Riparian and bottomland	95	19	18
Sand dune	92	12	11
Herbaceous	82	27	22
Estuary, Lagoon and Embayment	78	9	7
Stream	54	63	34
Forest	48	62	30
Lake and pond	34	44	15
Woodland	28	32	9
Scrub and chaparral	25	72	18
Alpine	0	10	0
Shore and intertidal	0	16	0
Totals	47	380	178

* This number refers to types and varieties of natural communities, not specific sites or locations.

Native California Animals Now Extinct or Extirpated* in the State

Birds
- Santa Barbara song sparrow
- Sharp-tailed grouse*
- California condor
- San Clemente Bewick's wren

Mammals
- Bison*
- Grey wolf*
- Long-eared kit fox
- Grizzly bear*
- Jaguar*
- White-tailed deer*

Fish
- Shoshone pupfish
- Tecopa pupfish
- Clear Lake splittail
- Thick-tailed chub
- Bull trout*

Invertebrates
- Pasadena freshwater shrimp*
- Sooty crayfish*
- Antioch Dunes katydid
- Yorba Linda trigonoscuta weevil
- Fort Ross trigonoscuta weevil
- Antioch weevil
- Mono Lake hygrotus diving beetle
- Valley mydas fly
- Antioch robber fly
- Voluntine Stonemyian tabanid fly
- Pheres blue butterfly
- Sthenele wood nymphy butterfly
- Atossa fritillary butterfly
- Strohbeen's parnassian butterfly
- Xerxes blue butterfly
- Castle Lake rhyacophilan caddisfly
- Yellow-banded andrenid bee
- Antioch sphecid wasp

* No longer occurs in California, but still exists elsewhere.

SUSAN MIDDLETON

Coachella Valley fringe toed lizard

Riparian Woodland, South Fork of the Kern River

The California Nature Conservancy
785 Market Street
San Francisco, CA 94103
(415) 777-0487

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Restoration & Management Notes

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TNC Volunteer Restoration Corps

Volunteers are playing a key role in the California TNC's increasing efforts to expand existing, drastically reduced habitat for native species through restoration efforts. Response to appeals for help has been so great that the organization now publishes a newsletter for volunteers involved in this work. Here a group of retirees from the Chevron Corporation pair off to prepare holes and plant seed of valley oak at the Cosumnes River site.

Photo by Mary Ann Griggs

TNC Undertakes Riparian Restoration Projects in California

Two major projects signal a venerable conservation organization's growing interest in restoration.

By Rich Reiner and Tom Griggs

Back in the 19th century, when pioneer farmers were searching for new opportunities in California, the endemic valley oak beckoned "plow here, this is the finest soil in California." As a result in less than 100 years more than 99 percent of the riparian forests of California's Great Central Valley were gone. Silent are the riverbanks where yellow-billed cuckoos once cooed; gone are the nesting Swainson's hawks, and the king salmon that once navigated the area's rivers and streams.

It is not difficult to understand why the once vast riverside forests of California now exist mainly as memories in the minds of greying naturalists. After all, California did not become the world's sixth-ranked economic power by selling acorns!

Nevertheless, it is sobering to realize how rapidly the native landscape was transformed, and how rapidly many of its plant and animal inhabitants have disappeared. Much of the Central Valley today is a monotonous landscape of laser-leveled farm fields, criss-crossed by channelized and riprapped rivers.

Is it realistic to foster even a slim hope that such ecological devastation and reordering could be reversed in our lifetime? The answer is unequivocally, yes! There is a new moon on the rise. Actually, a new vision, foreign to the Great Central Valley, but, oh, so welcome! It is a vision of concerned people volunteering time and money to replant forests, and of groves of young oak and cottonwood trees sprouting skyward.

The vision has been slow to materialize, but there is little doubt that a new crusade has begun in California.

Rich Reiner is Stewardship Ecologist, and Tom Griggs is Sacramento Area Manager with the California Nature Conservancy, 785 Market Street, San Francisco, CA 94103, (415) 777-0487. A shorter version of this article appeared in the May-June issue of "The Nature Conservancy Magazine."

A Careful First Step

It is interesting to ask why environmental groups have been so slow to support the restoration movement. Perhaps the root is philosophical. Many conservationists feel that undisturbed nature is somehow inherently superior to an environment that has been manipulated by human beings, however skillfully and sensitively. No doubt this attitude reflects the admonitions of ecologists overwhelmed by the complexity of ecological systems and to some extent by the teachings of Native American and eastern philosophies. In addition, there is the fear that efforts to save existing examples of biological communities will be undermined by the very notion that it may be possible to restore degraded systems.

The Nature Conservancy (TNC), a non-profit organization dedicated to the preservation of biological diversity, has been affected by the concerns mentioned above since its formation in 1951. Throughout its evolution, the Conservancy has developed numerous techniques for the conservation of rare species and ecological communities. Though involved in various forms of management on its holdings, until recently TNC has directed most of its resources towards acquisition and maintenance of high-quality natural areas and has done very little in the way of out-and-out restoration.

In recent years, however, it has become increasingly clear that restoration can play an important role in furthering TNC's mission. One reason for this is that opportunities for acquisition of high-quality, undisturbed natural areas have become increasingly rare. In 1959, for example, when TNC first began acquiring land in California, there were numerous pristine examples of ecosystems from which to build preserves. Now, just 30 years later, those "easy" preserves are becoming very difficult to find. Moreover, those that are available are increasingly likely to be small, and also to be adjacent to ecologically degraded areas.

The result has been a definite shift in the pattern of acquisition. In 1987, the *majority* of TNC's acquisitions in California included degraded lands. Often this is part of the strategy for conserving existing, high-quality natural areas, since it is clear that conservation of these lands may well depend on recovery of nearby degraded areas. Although in many cases, given sensible stewardship, this recovery might take place naturally over a period of time, the natural recovery process may be slow—too slow, in fact, to ensure survival of species that have been reduced to—or below—the minimal viable population. Realizing this, and learning to act on it, has taken time, however. In California, it took a reclusive bird with a silly name to help the Conservancy realize that restoration technology could help a species with little time to wait.

The Kern River Experience

The western race of yellow-billed cuckoo (Coccyzus americanus) is among the most beautiful birds inhabiting the forested river systems west of the Rockies. About the size of a large robin, the cuckoo is identified by its slim appearance, dull brown back, white chest and conspicuous white spots on the tips of its jet black tail feathers. It is a migratory summer resident that winters in South America and breeds (in very reduced numbers) in riparian forests from northern Mexico to the Sacramento Valley. The decline of the western race of yellow-billed cuckoos can be directly related to loss of major riparian forests, particularly cottonwood and willow forests in California's Great Valley and along the Colorado river.

Cuckoos were locally common along most of the forested rivers of interior California as recently as the mid 1940s. Shortly after the end of World War II, however, a massive effort was begun to develop the water resources of the Great Valley for the sake of agricultural and urban development. This meant draining the last of the once extensive marshlands and building dams on most of the region's rivers. As a result of this development, riparian forests critical to breeding cuckoos quickly declined.

By 1970, biologists believed yellow-billed cuckoos were extirpated from all the interior river systems of California. During the early 1970s, however, two dedicated ornithologists, David Gaines and Stephen Laymon made an extensive search of the willow and cottonwood habitats in California and discovered three remaining populations. One of the most promising of these was on the south fork of the Kern River in the Sierra Nevada foothills near Bakersfield. Gaines and Laymon estimated that it included about 12 nesting pairs. In 1980, hoping to protect at least a portion of what little cuckoo habitat remained, TNC purchased 456 ha along the Kern River, including a critical, 100-meter-wide ribbon of willow and cottonwood forest. Laymon continued his studies at the Kern River Site and several Sacramento River sites until 1985 when he concluded that "if habitat loss was not quickly reversed, cuckoos would soon join the list of other species extirpated from California."

TNC was now faced with a tough decision: initiate a forest restoration effort now, or stand back and watch the birds disappear. Steve Johnson, California Director of Stewardship and Science for the TNC, was the first to take the bull by the horns. Steve had recently visited an experimental riparian forest restoration project on the Colorado River headed by Bertin Anderson (R&MN 6:2, p. 84), and was sufficiently impressed to get Bertin up to the Kern River Preserve for an evaluation of the site. Anderson was cautious but enthusiastic about growing trees on the Kern River, and together, he and Johnson took their case to the California Department of Fish and Game to request funding. Chris Unkel, Lands and Natural Area Coordinator for the Department, immediately recognized the urgency of their plea and helped arrange allocation of $100,000 towards the project.

The Conservancy is unsurpassed at the business of acquiring, preserving and managing land for conservation purposes. But restoration was something new—a largely experimental and potentially expensive venture. In addition to the obvious fact that an endangered bird hung on the edge of extinction, TNC had stuck its neck out in other ways as well with this project, and many eyes were focused upon us. We had to initiate a major restoration project with little previous experience. Bertin Anderson suggested a phased approach to the project with phase one centering around investigating the habitat needs of yellow-billed cuckoos. Phase two would be an initial restoration effort strongly oriented toward experimental planting treatments and monitoring of tree survival and growth. Only after the initial research was conducted would we attempt large scale restoration.

Beginning in 1985, Steve Laymon began capturing cuckoos and equipping them with radios to determine their home range and feeding habits. He and his team quickly discovered that cuckoos nested almost exclusively in red willows (*Salix laevigata*), and fed mainly on sphinx moth larva (*Sphingidae* spp.) living in groves of cottonwoods (*Populus fremontii*). This was a surprise since up to this point, data from other studies indicated a strong preference for willow use. The difference was attributed to the fact that other studies had been biased because the birds had been located by casual encounter or were birds returning calls from recorded tapes. The birds easiest to observe in these studies were those low in trees and most often on the edges of clearings. A bias was introduced because the low-growing forest edge was most often willow. The new results made it clear, however, that cottonwood had to be a major component of the restoration project.

Radio telemetry also revealed important insights into cuckoos home range and territorial behavior. Home range proved much larger than had been thought, averaging 20 ha. The shape of territories varied in important ways as well. Where forest suitable for cuckoo habitat existed in broad tracts, territories were generally potato-shaped. When the forest existed only as a thin, remnant corridor along a waterway, however, cuckoo territories took the shape of long strips or ribbons along the shore. Besides the fact that this reduced the number of cuckoos that could use a given stretch of river bottom, there appeared to be a minimum forest width below which cuckoos cannot afford the energy needed to travel the ribbon for food. The cut-off point appeared to be about 90 meters, and this became a key factor in the planning of our restoration efforts.

Our next concern was cost. Most of the newly created Kern River Preserve had previously been cleared of forest for cattle pastures, and it was certain that the available funds would not do the whole job. Bertin Anderson initiated an in-depth cost- benefit analysis for approximately 100 ha of the preserve's most promising pastures. In order to determine the capacity of each area for growing forest he augured holes to determine and map the depth to the water table. In addition, he measured the electrical conductivity (EC) of the soil, an indicator of salinity, which is a major problem on some riparian sites. He also estimated for each area the size and per-acre cost for planting, the availability of water for drip irrigation, and final-

Aluminum screen protects young seedlings from herbivores ranging from deer to grasshoppers. Inside is a plastic cup inserted into the ground to protect seedlings from roots of surrounding weeds.

Photo by Treve Johnson

ly the likelihood that the area would actually be used by cuckoos if it were restored to forest. The result of this analysis was a prioritized list of the preserve's most promising restoration sites.

Having completed the site analysis, Anderson, with help from Preserve Manager Rick Hewett, began a series of experimental plantings (R&MN 6:2, p. 22) designed to refine restoration techniques for the site. One-hundred and twenty-six rooted cuttings were measured and planted in randomly distributed augured holes. The experimental plantings included both cottonwood and willow trees provided with differing drip irrigation rates over various lengths of time. In addition, detailed records were kept on the depth to the water table and the soil salinity for each augured hole. Trees were actually measured daily, and a computer-assisted analysis of the results was used to refine watering schedules. Using a complete data set with information about planting conditions, weather, watering regimes, weed control, and deer browsing, Anderson was able to explain exactly why some trees showed extraordinary productivity and others did not. He discovered that both cottonwood and willow production could be increased 12 percent by restricting the size of cuttings to 16-18 inches (40-45 cm). Also, by careful computerized monitoring as irrigation proceeded, first- season productivity could be increased by 30 percent. During the peak of the growing season trees were averaging more than 0.6 inches (1.5 cm) of height growth per day! It was also learned that the productivity of trees planted in locations with water table depth greater than 4 feet (1.2 m) could be increased by up to 15 percent by increasing irrigation rates to more than 10 gallons (36 L) per tree per day.

The time and money invested in research and careful monitoring of tree growth at the Kern River site has been an outstanding investment. We have learned how to cut costs and increase the productivity of trees by understanding what it takes to grow trees under different site conditions. For example, we now know that drip irrigation, a major expense, may not be necessary at a site if the depth to the water table is less than three feet. In addition, in areas where salinity is greater than 2 ECs, it is best not to attempt planting trees since success under these conditions is unlikely.

It is too early to tell whether restoration efforts at the Kern River will help save the yellow-billed cuckoo in California. Cuckoos foraged on a restoration site at the Colorado river when trees were about 10 feet (3 m) tall. Many trees on the Kern River have now exceeded this height, yet no cuckoos have been spotted in the trees. Unfortunately, habitat destruction across the state has continued, and cuckoo populations continue to decline. We estimate that the total for the entire state is now below 50 nesting pairs. The Kern River population declined to only two known nesting pairs in 1988.

TNC has now planted over 30 ha of new forest at the Kern River Preserve. Up to 30 ha more is planned for 1989. As this forest reaches maturity, we listen intently for the distinctive song of the cuckoo.

Scaling up on the Cosumnes

Though many questions about the outcome of the restoration effort on the Kern River remained unanswered, by 1987 the project was looking promising enough to encourage TNC to consider some even more ambitious restoration efforts. An opportunity soon materialized in the form of some agricultural land TNC acquired along with a choice forest dominated by valley oak (*Quercus lobata*) along the Cosumnes River in Sacramento County.

The Cosumnes River acquisition offered a superb opportunity for a natural area conservation program that would integrate preservation of a high-quality native community with restoration of adjacent degraded land. In a statewide survey carried out in 1985 vegetation ecologists from the California Department of Fish and Game found that the Cosumnes River supports some of the finest stands of valley oak-dominated riparian forest in the Great Valley.

The reason that these stands have remained into the present is that the Cosumnes River has no major dams and still undergoes massive winter flooding. Floods preclude field-crop agriculture in the flood plain, and have, in effect, protected the forest in these areas from development. Most of the remnant forests are either in the center of the flood plain or in low areas that do not dry out until well into the summer dry season, and indeed it was a series of floods in the early 1980s, together with the widespread economic downturn in the farming community in the United States, that made it possible for the Conservancy to purchase these forested lands from their financially beleaguered owners.

The Cosumnes River Preserve occupies 590 ha, about 160 ha of which is covered by riparian forest dominated by valley oak. The remaining 430 ha is either laser-levelled row-crop fields and irrigated pasture, or land that has not been leveled, and where natural vegetation persists but has been severely overgrazed. The Conservancy was compelled to take these lands along with the forests. But what should be done with these developed agricultural lands? Certainly, the ecological processes that had shaped the riparian forests are still intact: the soil is first class for growing a forest, and natural flooding still occurred regularly. If TNC did nothing to these agricultural fields, natural succession would probably result in a forest after several decades. However, could other species dependent upon this forest wait this long? TNC decided to proceed with the restoration of the riparian forest at the Cosumnes because (1) time was indeed short for the wildlife that depends on the riparian forest, and (2) the abandoned fields offered a laboratory for development of biologically efficient and cost-effective restoration methods for this community type.

As on the Kern River, there was little precedent for a project of this kind, and there were numerous questions about how to proceed. The Conservancy again decided to rely on outside help, and early in 1987 contracted with Harvey & Stanley Associates of Alviso to develop a plan to restore native vegetation on about 75 ha of the laser-levelled fields. John Stanley and Harold Appleton used aerial photographs to determine the original extent of the riparian forest, and took a series of soil samples to ascertain suitable sites for trees and marshlands. The plan they developed called for planting of about 40 ha to riparian forest species; the remaining 35 ha of the field would be devoted to marshlands. Stanley and Appleton also proposed for each tree species a planting method based largely on their experience at a smaller site the preceding year. This left TNC with just one question: how to implement the plan?

The Volunteer Solution

If TNC could replant 30 hectares of cottonwoods along the banks of the Kern River, why not replant 40 hectares of valley oak forest along the banks of the Cosumnes River? The obvious problem again was finding funding for such a noble effort. The Kern River project had been carried out by paid workers in a project supported by grants from state and private sources, and by TNC volunteers, who helped to keep costs down. If a private firm were contracted and volunteer labor were not available, then costs could run as high as $25,000 per hectare. That's ten times as much as TNC has been paying for land in riparian areas in central California!

In any event the cost of hiring a crew to plant 40 ha would have been well in excess of the project's budget. Elsewhere in California, TNC had used volunteers from its membership to accomplish some rather sizeable projects—notably building 150 km of fence on Santa Cruz Island Preserve and many miles of fence at the Carrizo Plains Preserve. The fence building projects had been of high quality and successful, so why not try having volunteers plant a riparian forest? At this time volunteer Bruce Handley came forward to take on the challenge of organizing a volunteer effort to carry out a "pilot planting" of 2,000 valley oak acorns AND to maintain them by removing weeds and applying water as necessary through their first growing season.

In October, 1987, some 30 volunteers organized by Handley collected 15,000 valley oak acorns from trees growing on the preserve, and in mid-January assembled again for a planting session. In response to notices in TNC, Audubon Society and Sierra Club newsletters, over 200 persons showed up and planted the entire consignment of 2,000 holes in about two hours! Each acorn was planted 1-2 cm deep in a hole lined with a 1-quart plastic cup from which the bottom had been removed. (The purpose of the cup is to protect the seedling from competition from the roots of weeds growing outside the cup and to support a cylinder of aluminum window screen which protects the seedling from predators such as deer, voles, rabbits, and grasshoppers.) The acorns were washed for five minutes at the time of collection (to remove the secretion of aphids which acts as a substrate for fungi), then stored in a refrigerator at 5 C to slow the germination triggered by washing. By the January planting date, most acorns had a root 2-15 cm long.

Perhaps the chili feed afterwards had something to do with the remarkable turnout. In any event, the planting looked satisfactory, and indeed as the weather warmed in the spring the acorns germinated and grew. To control weeds we called upon the California Department of Corrections (remember TNC is a non- profit corporation) for help in removing weeds outside of the screen protectors, and Bruce Handley organized monthly volunteer workdays to take care of the more exacting removal of weeds from inside the protective screen.

Volunteers also played a major role in managing the irrigation of the new plantings, from the laying-out of the drip-irrigation system in the spring to applying the water through the growing season. Irrigation of first-year seedlings is widely accepted as necessary to produce healthy, robust seedlings in our area, where rainfall ceases in April and does not resume until November. We had very little idea how much water to use and how often to apply it. Our best guess was to give the seedlings water every three weeks. About 300 of the seedlings received water through a drip- irrigation system at a rate of 2 gal. (7.2 L)/hour for 4-6 hours every three weeks; the remainder were irrigated more parsimoniously by hose and bucket (about 2-3 gallons every three weeks), using water pumped from a pond on the site.

The results were instructive. As of mid-August more than 90 percent of the seedlings were still alive. Half the individuals on the drip-irrigation line were nearly a meter

Pint-sized restorationist wields a shovel to create a planting hole in a mowed strip

Photo by Mary Ann Griggs

tall and extended well above their protective screen! This growth rate was a complete surprise. Apparently, these young oaks will respond to a lot more water than we had realized.

Building on this experience, in November of 1988 we planted over 7,000 acorns on about 30 ha—that is 250 acorns per hectare on 6- m centers. Since 200 volunteers on one day had proved a bit too many, we spread this task over three weekends. Altogether, volunteers put in more than 350 days to complete this planting.

The successes of these volunteer efforts has inspired TNC to expand its use of volunteers and initiate a habitat restoration program on a statewide level. 1989 will be the test year for this program. Perhaps it will be possible, after all, to restore some measure of the original biological diversity that made California the treasure that it was and can be again.

Where From Here?

TNC has begun restoration efforts on a relatively large scale in riparian forests. We have made this move because we believe that the appropriate methods are now available. But what about other degraded environments in California where the technology for restoration is woefully lacking? Native beach dune communities along the northern California coast are rapidly being invaded by introduced grasses. California's interior prairies have been grazed by livestock to the point where native species are the exception, not the rule. Regardless of our enthusiasm about our success with riparian trees, we need to promote research on other sites as well.

It is evident that restoration will play an important role in more and more of TNCs projects. It should be kept in mind, however, that currently available restoration techniques are not a panacea for reviving sick or deteriorating ecosystems. In addition, *projects simply will not succeed in systems where keystone species have been lost or major ecological processes have been altered or interrupted.* Our experience with restoration on both the Kern and Cosumnes Rivers makes this clear: only when natural hydrologic conditions persist, and where nutrient cycles, soils, and populations of native species have been protected can restoration be an effective tool in the effort to save our great planet's biological diversity.

Perspective

Restoration projects like those now underway on the Kern and Cosumnes Rivers in California may represent a new level of commitment and involvement, but they are by no means without precedent for the Nature Conservancy, according to key members of the organization.

Steve Johnson who, as Director of Science and Stewardship for the Conservancy's California Field Office, was directly responsible for the Kern and Cosumnes River projects, notes that the Conservancy has been involved in various forms of restoration throughout its 38-year history.

"This is just a natural consequence of our element-driven approach to conservation," Johnson notes. "We try to save intact systems when we can. But there comes a time when all that is left is inadequate and you face the prospect of letting something go extinct or doing restoration. When that happens, you find yourself doing restoration."

In the past, however, Conservancy restoration efforts have mostly been species-oriented efforts to bring back threatened populations of natives or to control invading exotics in otherwise more or less intact systems.

What is different about projects such as those on the Kern and Cosumnes Rivers is the extent to which they involve efforts to rebuild profoundly degraded systems by reintroducing key elements of their structure—in these cases the dominant trees.

Nevertheless, the Conservancy has had a hand in various wholesale restoration projects over the years. TNC Director of Science Robert Jenkins notes, for example, early Conservancy support for Ed Garbisch's salt marsh restoration work (R&MN 1(4), p. 4) and projects such as the prairie restoration work at Fermilab near Chicago (R&MN 5, p. 60).

Jenkins also notes that if there has been an increase in large-scale, intensive restoration projects in recent years it probably has more to do with the increasing Conservancy strength at the state level than with any significant shift in philosophy, direction, or even emphasis.

John Humke, Director of Stewardship for the TNC, underlines a general feeling that the role of restoration is likely to increase in the future—partly because remnant natural areas are becoming increasingly scarce, and partly to counter major environmental changes, such as anticipated climate changes.

"We recently did a paper on global warming," Humke notes. "And what we saw there was that if we get the warming some scientists expect, restoration is going to become an extremely important conservation technique. A lot of things are going to have to be moved to new areas. It is a daunting prospect, to say the least."

THE TRIBUNE, Oakland, California *Monday, June 18, 1990* **A-9**

California farmers reaping millions from another drought

By Ted Bell
McClatchy News Service

SACRAMENTO — California farmers, who are facing a fourth straight year of drought conditions, have been reaping millions of dollars in federal aid thanks to somebody else's drought.

The source of more than $40 million in relief that has flooded California farms in the last two years is the Disaster Assistance Act of 1988, which was intended as emergency aid for Midwestern farmers whose crops were withering under an intense drought that year.

Farmers in California and other states were able to tap into that wellspring of federal funds because as the legislation was reworked on its way through Congress and later modified by agriculture officials, the definition of which disasters were covered was broadened.

Records obtained under the federal Freedom of Information Act indicate that "disaster" has been interpreted to include almost any hardship, including too much water, too little water, too much heat, too much cold, disease and misapplication of chemicals.

U.S. Department of Agriculture officials now say the $5 billion drought-driven assistance plan, which was renewed in 1989, has become so broad that it in essence allows farmers to enjoy a crop-insurance program without paying any premiums.

Indeed, in his current budget request, President Bush is proposing to make the disaster program a permanent replacement for the federal crop-insurance program.

The evolution and implementation of the 1988 relief bill — which was hurriedly passed at a time when newspapers and television carried vivid images of scorched earth and dying farm animals in the Midwest — shows how intertwined farmers and federal programs have become.

California farmers, for example — who use 85 percent of the state's water — have come to depend on federal subsidies to keep the price of that water low. And many farmers must also rely of federal crop subsidies to make a profit.

Some California farmers said they regret the need for such programs. But they echo the statement of Texas cotton farmer Don Gresham, who told a reporter last December he uses federal disaster and crop-insurance programs to gross $100,000 more than if he had actually planted cotton.

"You can't farm without government; you play their game," he said.

A check of program records for 1988 and portions of 1989 obtained from USDA's Agricultural Stabilization and Conservation Service found that some farmers have reaped big benefits from the drought relief program.

A Kern County family split its 2,734-acre farm eight ways and collected $367,434 for "heat" damage to irrigated cotton.

The program has a limit of $100,000 per farmer, but that didn't deter some California operations from restructuring their farms into several entities, each owned by a family member.

Some farmers received disaster assistance and then garnered federal subsidies for a replacement crop.

A Sacramento wild rice farmer, for example, collected more that $30,000 in 1988 because it was unusually cold when the crop matured. He then planted regular rice on other parts of his farm and received federal subsidies for that crop, which he later sold for $50,000.

Ironically, the decisions of who should get aid under the disaster program is made primarily by fellow farmers in the same county.

The legislation's authors turned over that authority to appointed committees in every agricultural county in the country. The committees comprise, for the most part, farmers passing judgment on the applications of their neighbors, who may replace them on the committee the following year.

Richard A. Schwarz
3075 Tipperary Lane
Idaho Falls, ID 83404

April 25, 1991

Governor Cecil D. Andrus
State Capitol Building
Boise, ID 83720

Dear Cece:

As you know, I have had the privilege of representing Idaho as a member of the Pacific Fishery Management Council for the past eight years. The past two years I have served as Chairman. During this time I have had the opportunity to observe first-hand some aspects of the fishing industry which are unknown to most people. I have also met some very fine people during my travels along the Pacific Coast. From this I have developed an understanding of the fishing industry which most people from Idaho can never comprehend.

Right now, we are going through some trying times on the Columbia River because of the impact of flow conditions on our anadromous fishery resources. You are in the forefront in trying to get something better for Idaho and especially for the fish. I appreciate that more than words can express. But Idaho is not alone in this predicament, northern California and southern Oregon have been feeling the effects of a prolonged drought - especially their commercial salmon fishermen. You also know of this problem first-hand because it also occured in the late seventies while you were Secretary of the Interior. I frequently see your name on court cases which pertain to things such as flows in the Klamath-Trinity River system.

The Pacific Council has just concluded our April meeting at which we finalized recommendations for the 1991 salmon seasons coastwide. This will be a disastrous year. I know you are aware of that from communications and articles on this subject. A friend of mine, whom I met while serving on the Council, is - or perhaps was - a commercial salmon troller operating out of Shelter Cove, California. He is a retired carpenter who has been supplementing his income by fishing for salmon. I have visited him at his home port and met the fishermen there. I have the highest regard for him. His name is Bill Duncan. We have become close friends over the past two years, even though the Pacific Council has been imposing severe restrictions on his ability to fish. Following our April meeting, which produced the most restrictive salmon seasons coastwide ever since the passage of the Magnuson Act, Bill called me and read a poem he wrote on his way back from the Council meeting in Portland. I was impressed and asked him to send a copy to me, that I wanted to pass it on to some people I feel should see it. I have enclosed a copy of that poem. It speaks for itself. The message is clear, Bill is right on.

Hopefully we all can do something to preserve, and possibly even enhance, our salmon resources. Idaho's salmon provide little harvest opportunity to the commercial ocean fishermen off Oregon and Washington, let alone California. But the plight of the fishermen is tied directly to actions over which they have no direct, or even indirect, control. Bill's poem addresses this fact. I think the message needs to be broadcast and understood. It isn't the fishermen who are hurting the fishery resource; it's dams, either for hydropower or irrigation - or both.

Thanks for being a leader in our serious efforts to do something for the fish.

Sincerely yours,
-RAS-
Richard A. Schwarz

A SALMON TROLLER'S LAMENT

By Barnacle Bill Duncan

The farmers get cheap water to grow cotton, hay and rice
and then collect a subsidy, that really makes it nice.

They poison all the run-off, with selenium I am told
and cry "It's only right," while they line their purse with gold.

"We're helping the economy", the Agri-business booms
"if it wasn't for our cotton you'd have no 'fruit of the looms'."

They drive around in their Cadillacs, their sons and daughters too
and claim the water rights are theirs, while the salmon runs are few.

The salmon's not important, its only a fish they say
we can get all we want, from Canada and Norway.

While the trollers put up millions, to try to save the run
we fight with all those Bureaucrats, and that really isn't fun.

For too few public servants know what the name implies
for we are getting"serviced", while listening to their lies.

We're trying our gol-darndest to keep those runs alive
we know that we will all be gone, if the salmon don't survive.

Now we're facing a bad year, like we've never seen before
I wonder: "Will the salmon be there, when the trollers are no more?"

The farmers will get drought relief, and not even ply their craft
but the poor damned salmon trollers are gonna get the shaft!!!

Wednesday, May 1, 1991 San Francisco Chronicle

CONSUMER ALERT

THE FISHMONGER

Bad News For Salmon Lovers

BY JAY HARLOW

SPECIAL TO THE CHRONICLE

Once upon a time, if you saw fresh salmon in the market anytime from May to September, it was most likely locally caught. This year, we can't be so sure. With severe restrictions in terms of dates and locations, northern and central California commercial salmon fishermen are predicting that this year's season will be "the worst ever."

According to Zeke Grader of the Pacific Coast Federation of Fishermen's Associations, continued water diversions during the last four years of drought have taken a heavy toll on the spawning salmon populations in the Klamath-Trinity and Sacramento-San Joaquin river systems. Most salmon caught off the California coast originate in these rivers, and the fish that will make up the bulk of this year's catch are the progeny of spawning runs that suffered badly during the first years of the drought.

The federal Pacific Fishery Management Council, which sets ocean salmon seasons and harvest rates, has the responsibility for balancing all the competing demands on the existing stocks. These interests include commercial and sport fishing, maintenance of sufficient spawning populations in the rivers, and in the case of the Klamath system, traditional claims of resident Indian tribes for in-river fishing.

With this year's low population projections, the council continued the recent trend of reducing commercial fishing seasons, to the point that some areas will be open for as little as two months of the traditional six-month season.

Although the winter-run population in the Sacramento River is in trouble, the genetically separate fall-run subspecies is in relatively good shape. Most salmon action may be south of San Francisco, where salmon are nearly all Sacramento River fall-run kings.

The regulations do not impose any closures from Pedro Point, San Mateo County, to the Mexican border, so we can expect a large share of the local salmon to be landed in ports such as Princeton, Santa Cruz, Moss Landing and Monterey. This area will be the only source of fresh salmon for most of June and July.

In normal years, some of the state's most productive salmon fishing grounds are right outside the Golden Gate and northward. Most fish here are also Sacramento kings, but just enough Klamath fish are mixed into the stocks to require some restrictions.

As a result, the area from Pedro Point to Point Arena (near the Sonoma-Mendocino county line) will be open to fishing in May, August and September, but June and July fishing is limited to three five-day openings beginning June 8, June 26 and July 11.

North of Point Arena, where most of the fish are of Klamath origin, the seasons are even more restricted. Fort Bragg, Shelter Cove and other ports on the Mendocino County coast won't see any openings until August 1, and the salmon season on the Humboldt County coast won't begin until September 1.

When you do see local salmon this year, it should be labeled as "California King Salmon."

Given the choice, I'll take a fresh local king salmon over any other. In honor of the opening of the season, here is a recipe I enjoyed at an event at Square One earlier this year.

Bay Area resident Jay Harlow is the author of "Shrimp" (Chronicle Books) and the co-author of the "California Seafood Cookbook" (Aris Books).

CALIFORNIA
King
SALMON

BAKED SALMON WITH PRESERVED LEMONS AND ONION CONFIT

Adapted from "The Mediterranean Kitchen," by Joyce Goldstein (Morrow, 1989).

INGREDIENTS:

PRESERVED LEMONS:

☐ 2 large lemons
☐ ½ cup sugar
☐ 1 cup water

MARINATED OLIVES:

☐ 24 kalamata or Moroccan olives, cracked or pitted
☐ 4 tablespoons fruity olive oil
☐ 1 tablespoon grated orange zest
☐ 2 garlic cloves, crushed

ONION CONFIT:

☐ 6 tablespoons olive oil
☐ 6 large onions, thinly sliced
☐ 4 teaspoons ground ginger
☐ ½ teaspoon turmeric
☐ 1 teaspoon ground coriander
☐ 1 teaspoon ground cumin
☐ 2 teaspoons paprika (optional)
☐ Salt and pepper
☐ ½ cup fish stock
☐ Chopped parsley or cilantro, for garnish
☐ 6 diagonal slices salmon filet, about ⅓ pound each

INSTRUCTIONS: The lemons (make the day before serving): Rinse lemons and wipe dry. Cut each into 8 or 16 thin wedges. Boil in a large pot of water about 5 minutes and drain. Soak in cold water to cover 1 hour, then drain.

Make a syrup of the sugar and 1 cup water in a medium saucepan; add lemons and simmer until tender, about 20 minutes. If syrup is too thin, remove lemons and reduce syrup a bit. Let cool, then refrigerate lemons in syrup overnight.

The olives (make the day before serving): Combine olives, olive oil, orange zest and garlic; stir to combine. Marinate at room temperature overnight.

The onion confit (make on serving day): Heat oil in a large skillet over medium heat. Add onions and cook until sweet and soft, about 20 minutes. Stir in spices and cook a few more minutes. Season to taste with salt and pepper and set aside at room temperature.

Preheat the oven to 450°.

Remove lemons from syrup with a slotted spoon and add to onion confit; add syrup to taste.

Oil a baking sheet and arrange fish on it in a single layer, skin side down. Spoon onion mixture over fish and drizzle with a little fish stock. Bake until fish is just cooked through, about 7 minutes. Transfer fish and onion confit to serving plates and garnish with olives and chopped parsley or cilantro. Serve with couscous or roasted potatoes. Serves 4 to 6.

PER SERVING: *620 calories, 35 g protein, 36 g carbohydrate, 40 g fat (7 g saturated), 100 mg cholesterol, 330 mg sodium, 7 g fiber.*

SUMMARY ANALYSIS & COMMENTS ON THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT

S.484

INTRODUCED FEBRUARY 26, 1991 BY SENATOR BILL BRADELY

SECTION 1. SHORT TITLE.
Act to be know as the Central Valley Project Improvement Act.

SECTION 2. PURPOSE.
To promote and expand the authorized purposes of the Central Valley Project (CVP).

COMMENT: The new purposes of the CVP would be primarily fish and wildlife restoration and enhancement. Other purposes include water marketing, water conservation and expanding the service area to include the entire state. The expanded purposes are promoted through limitations on, or the elimination of, the use of water for existing CVP agricultural and municipal purposes.

SECTION 3. DEFINITIONS.
(Self-explanatory)

SECTION 4. LIMITATION ON CONTRACTING.
(a) General bar on contracting for sale of uncontracted firm yield of the Central Valley Project (± 1 million acre-feet) until Act's fish and wildlife and water quality improvements are made.

COMMENT: These "improvements" must also be accomplished prior to renewal of existing 40 year contracts, they include; 1) operating the CVP to "protect, restore and enhance" fish, wildlife and related habitat affected by the project and to provide "equitable treatment" of fish and wildlife with other primary CVP purposes, 2) provision of CVP water for public and private wetlands, 3) development and implementation of a program to mitigate fully damage suffered by fisheries, 4) a study of the effect of the CVP on fisheries, communities, tribes and businesses that have now or ever had economic, social or cultural associations with the fisheries, 5) fulfillment of the U.S. trust obligations with respect to the Hoopa Valley Indian Tribe on the Trinity River.

In addition, before the contracting prohibition is lifted, the current Bay/Delta process must be completed by the State Water Resources Control Board and the new standards be approved by the Federal E.P.A.

(b) Authorizes special 20-year contracts for the sale of 100,000 acre-feet of uncontracted firm yield for municipal and industrial purposes; revenues from sales directed to fund fish and wildlife restoration activities.

COMMENT: While this appears to be primarily a fundraising effort, and part of the "new CVP" (more urban water), it raises profound public policy questions and sets a dangerous precedent – the richest community, not necessarily that with the greatest need, will get additional water.

(c) General bar on renewal of water contracts for longer than one-year until specified fish and wildlife and water quality improvements are met. An exception is made which permits 20-year renewals if contractor agrees to forego 10% of previous contract amount, plus an additional 1% for each year beyond ten years.

Comment: Requirements under Section 4(a) above must be satisfied before contracts are renewed for over a one year term – given the requirements to be satisfied it can be said we will never see long term contracts again. However, up to a twenty year contract can be attained if 20% of the previously contracted water is forfeited to fish and wildlife purposes. The uncertainty and economic damage associated with year-to-year contract committments is clearly demonstrated in 1991 drought.

(d) Requirement that Secretary prepare a programmatic EIS on CVP water contract renewals.

COMMENTS: There is no way the Secretary of the Interior can prepare such a document within two years as required, if ever.

SECTION 5. WATER MANAGEMENT IMPROVEMENT.

This section establishes conditions for all new, renewed, or amended CVP water contracts for irrigation, municipal, and industrial purposes.

(a) & (b) Permit transfers of water under contract to any water agency and other entities regardless of price, duration or location, with a 25% portion of transferred water or financial proceeds of transfer dedicated to fish and wildlife restoration, and other conditions. Restrictions to protect State law and Delta water quality.

COMMENT: As demonstrated, this kind of wide–open approach to marketing allows the buying power of the purchasing entity to dictate water movement without regard to secondary or community impacts, environmental impacts or impacts on other projects or neighboring water users. The 25% transfer tax will prove so burdensome as to be a disincentive to transfer water. This Section conflicts with state law.

(c) Requires contractors to meter ground and surface water.

COMMENT: While this requirement would be extremely burdensome and intrusive, there is no rationale for its inclusion or even a requirement that the meters be read. Groundwater is purely a matter of state law.

(d) & (e) Require contractors to take responsibility for drainage management required to meet State and Federal water quality standards.

COMMENT: No federal drainage water standards exist, in fact, they are exempted from regulation. The purpose and objective of this section are most unclear.

SECTION 6. FISH AND WILDLIFE RESTORATION OBLIGATIONS AND AUTHORITIES

(a) Authorizes and directs the Secretary to operate the CVP for fish and wildlife and provide equitable treatment for fish and wildlife with other project purposes.

COMMENT: Since it is not defined, the notion of operating the CVP for fish and wildlife and provide equitable treatment for fish and wildlife is so nebulous as to be without true meaning. Given the other requirements of this Act, Section 6 will effectively make fish and wildlife the primary purpose of the project. This section invites endless litigation under section 9, the "citizen suit" provision.

(b) Requires the Secretary to provide specified quantities of water for Central Valley wildlife refuges.

COMMENT: This is the first understandable and productive requirement of the bill. CVPWA supports firming up contract deliveries to wetlands.

(c) Requires the Secretary to develop a plan to mitigate fully for damages suffered by anadromous fish populations because of the CVP and to comply with applicable State law requiring fish flows below dams.

COMMENT: This section of the bill is its foundation, but as we have found few mitigation responsibilities are clearly traceable to the CVP. Our fish and wildlife problems are the result of many, many different actions of man in California. Regardless, these responsibilities are swallowed up by the larger responsibilities to "protect, restore and enhance". As for minimum flows, the project has always met state established flow requirements.

(d) Requires the Secretary of Commerce to investigate and report on all effects of the CVP on anadromous fish populations and dependant fisheries, communities, tribes, businesses and other interests.

COMMENT: Why study if it is also being ordered that all of the problems be corrected?

(e) Requires the Secretary to develop a plan to fulfill trust obligations with respect to the fisheries of the Hoopa Valley Tribe and other Indian tribes affected by the CVP.

COMMENT: In light of the amount of Trinity water previously committed to instream flows by Secretary Andrus and current demands made by the Tribe, one can assume that most of the water on the Trinity will be dedicated to instream use.

SECTION 7. RESTORATION FUND AND TRUST.

(a) Establishes the "Central Valley Project Restoration Fund" in the U.S. Treasury.

COMMENT: The Restoration Fund will be a means of extracting money from today's customers to pay for all of the accumulated problems caused not only by the CVP over forty years, but also the actions of all people, since 1850. Funds would also be used for enhancement; improving conditions for fish and wildlife over what they were before the first pioneers arrived in California.

(b) Requires the Secretary to impose and collect a surcharge on CVP water and power sales to generate $30 million per year to implement fish and wildlife restoration goals of the Act. Revenues deposited in Restoration Fund.

COMMENT: This is an unfair and overwhelming requirement. The Act already has eliminated the last shred of certainty and reliability by taking existing supplies away from CVP customers. And then a funding requirement nearly equal to the existing irrigation O&M budget is placed on the beneficiaries.

(c) Requires the Secretary to contribute 1/2 of surcharge revenues to a private, non-profit California-based "Central Valley Project Restoration Trust".

(d) Provides for Restoration Trust to be administered by a seven person board with ecological restoration expertise selected by California officials. Trust purpose is to select and provide funding for projects that protect or restore the best examples of the Central Valley's biological diversity, its rare species, exemplary plant and animal communities, and large-scale natural ecosystems.

COMMENT: The concept of a Restoration Trust is not offensive per se, but if one is to exist it must also be State established and engage all interests that have impacted the natural environment.

(e) Establishes conditions for Restoration Trust operations in order to qualify for Federal contributions. Portion of trust proceeds provided to California Department of Fish and Game.

(f) Requires Secretary to use funds deposited in the Restoration Fund, other than those transferred to the private Restoration Trust, to implement the fish and wildlife restoration plans required by Section 6 of the Act, and to encourage and implement related ecological restoration in the Central Valley.

COMMENT: Also includes "encouraging research training and education in methods and technologies of ecosystem restoration."

(g) Establishes objectives for ecological restoration activities.

(h) Bars the Secretary from making expenditures from the Restoration Fund until the State of California commits to implement specified fish and wildlife protection and restoration measures on the Sacramento River.

COMMENT: Identifies the second well developed, understood program in the bill — Sacramento River Restoration Program. CVPWA supports passage of bills pending in Congress to authorize the program and we urge immediate implementation.

SECTION 8. ADDITIONAL AUTHORITIES.

(a) Authorizes necessary regulations and agreements.

(b) Authorizes use of low-cost project power for fish and wildlife purposes.

(c) Authorizes Secretary to obtain water supplies to implement fish and wildlife provisions of the Act.

(d) Authorizes Secretary to contract with water agencies and fish and wildlife interests for use of project facilities for municipal and industrial water supply, fish and wildlife purposes, and other beneficial purposes ("Warren Act" amendment).

(e) Authorizes Secretary to make project facilities available for carryover storage for drought protection and other purposes (water banking).

(f) Authorizes Secretary to adjust annual water charges to reflect avoided operations and maintenance costs of water carried-over.

(g) Requires Secretary to establish an office of CVP water conservation best management practices to develop criteria and standards for water conservation in the CVP. Provides for review, improvement, and implementation of water contractors conservation plans required by Reclamation Reform Act. Provides strict sanctions for failure to implement plans.

COMMENT: Sanctions include loss of contract supplies for failure to adequately conserve.

(h) Authorizes Federal grants for up to 50% of the cost of implementing water conservation measures required to achieve the water savings mandated by subsection 4(c), so long as water contracts are renewed by March 1, 1994 and measures are included in an approved water conservation plan.

COMMENT: Grants are fine, but who can rely on continued appropriations? Of more realistic concern, who will be able to come up with the other 50% if they are only holding a one year contract?

(i) Provides that Act does not authorize construction of new storage facilities.

(j) Provides that contract modifications required solely to implement provisions of the Act do not trigger RRA acreage and pricing limits.

(k) Requires annual reports from the Secretary on implementation of the Act.

SECTION 9. CITIZEN SUITS.
Authorizes citizen suits to enforce non-discretionary provisions of the Act.

COMMENT: Given the nebulous nature of this bill, litigation associated with the Secretary's alleged non-compliance with this Act will thrust the CVP into chaos for years to come.

SECTION 10. CENTRAL VALLEY PROJECT TRANSFER ADVISORY COMMITTEE
(a) Establishes the "Central Valley Project Transfer Advisory Committee" comprised of 16 State and Federal appointees.

(b) Directs the Transfer Advisory Committee to prepare a report to Congress and the President on all issues associated with transfer of the CVP to the State of California.

(c) Provides that committee will be co-chaired by State and Federal appointees.

(d) Applicability of Federal Advisory Committee Act.

(e) Requires Secretary to support activities of committee.

(f) Provides for meetings of the committee.

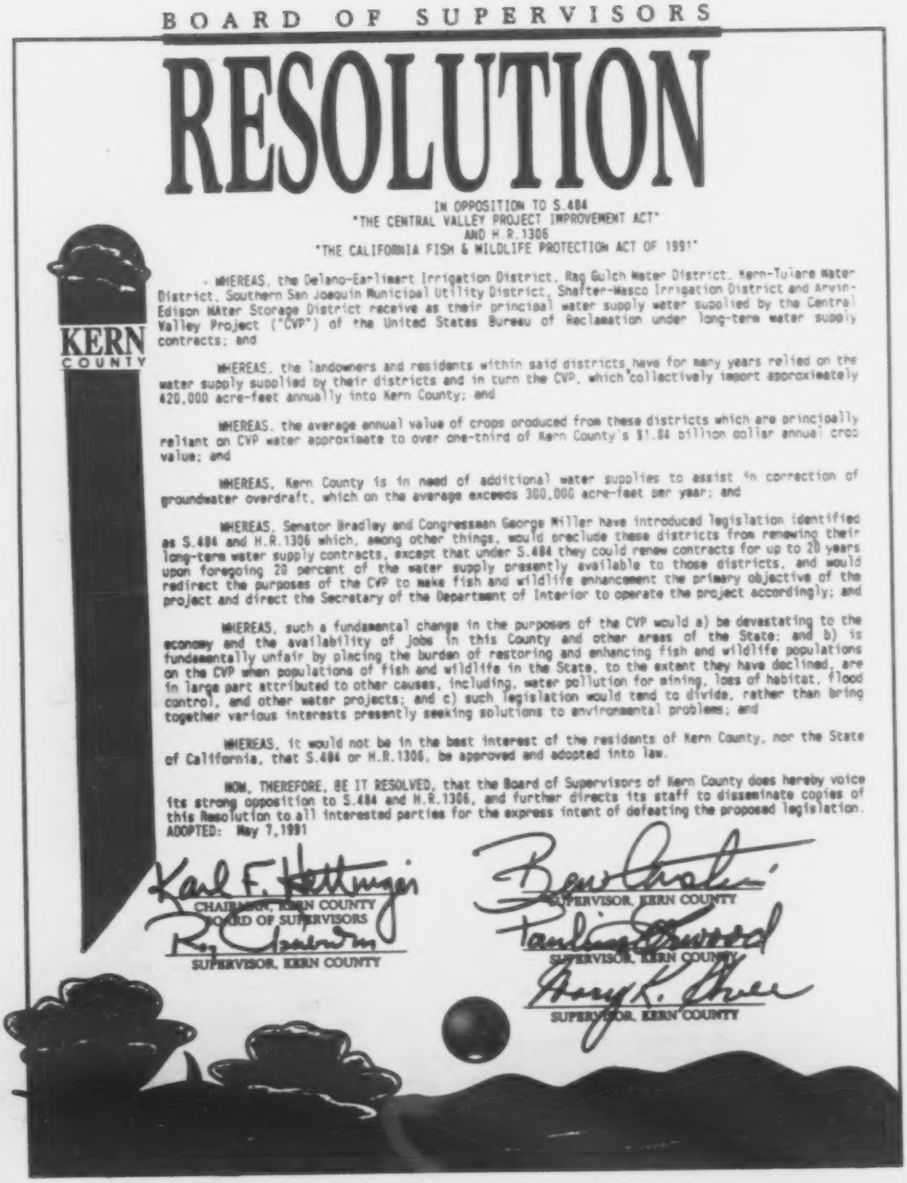
(g) Establishes December 31, 1993 deadline for submission of report and provides that committee will terminate 90 days after submission of report.

COMMENT: While we have no specific problem with such study, expectations that transfer would solve the "problem" associated with the CVP are without basis. Furthermore, the scope of study should be broadened to include transfer to the water and power customers or a quasi-governmental entity.

SECTION 11. AUTHORIZATION OF APPROPRIATIONS.
Authorizes appropriation of such sums as may be necessary to carry out provisions of the Act.

PREPARED BY:

CENTRAL VALLEY PROJECT WATER ASSOCIATION
JASON PELTIER, MANAGER
(916)448-1638



BOARD OF SUPERVISORS

RESOLUTION

IN OPPOSITION TO S.484
"THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT"
AND H.R.1306
"THE CALIFORNIA FISH & WILDLIFE PROTECTION ACT OF 1991"

WHEREAS, the Delano-Earlimart Irrigation District, Rag Gulch Water District, Kern-Tulare Water District, Southern San Joaquin Municipal Utility District, Shafter-Wasco Irrigation District and Arvin-Edison WAter Storage District receive as their principal water supply water supplied by the Central Valley Project ("CVP") of the United States Bureau of Reclamation under long-term water supply contracts; and

WHEREAS, the landowners and residents within said districts have for many years relied on the water supply supplied by their districts and in turn the CVP, which collectively import approximately 420,000 acre-feet annually into Kern County; and

WHEREAS, the average annual value of crops produced from these districts which are principally reliant on CVP water approximate to over one-third of Kern County's $1.84 billion dollar annual crop value; and

WHEREAS, Kern County is in need of additional water supplies to assist in correction of groundwater overdraft, which on the average exceeds 300,000 acre-feet per year; and

WHEREAS, Senator Bradley and Congressman George Miller have introduced legislation identified as S.484 and H.R.1306 which, among other things, would preclude these districts from renewing their long-term water supply contracts, except that under S.484 they could renew contracts for up to 20 years upon foregoing 20 percent of the water supply presently available to those districts, and would redirect the purposes of the CVP to make fish and wildlife enhancement the primary objective of the project and direct the Secretary of the Department of Interior to operate the project accordingly; and

WHEREAS, such a fundamental change in the purposes of the CVP would a) be devastating to the economy and the availability of jobs in this County and other areas of the State; and b) is fundamentally unfair by placing the burden of restoring and enhancing fish and wildlife populations on the CVP when populations of fish and wildlife in the State, to the extent they have declined, are in large part attributed to other causes, including, water pollution for mining, loss of habitat, flood control, and other water projects; and c) such legislation would tend to divide, rather than bring together various interests presently seeking solutions to environmental problems; and

WHEREAS, it would not be in the best interest of the residents of Kern County, nor the State of California, that S.484 or H.R.1306, be approved and adopted into law.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of Kern County does hereby voice its strong opposition to S.484 and H.R.1306, and further directs its staff to disseminate copies of this Resolution to all interested parties for the express intent of defeating the proposed legislation.
ADOPTED: May 7, 1991

Karl F. Hettinger
CHAIRMAN, KERN COUNTY
BOARD OF SUPERVISORS

Roy Ashburn
SUPERVISOR, KERN COUNTY

Ben Austin
SUPERVISOR, KERN COUNTY

Pauline Larwood
SUPERVISOR, KERN COUNTY

Mary K. Shell
SUPERVISOR, KERN COUNTY

MAY 03 1991

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0001
TELEPHONE (916) 445-7558

DISTRICT OFFICES

1111 FULTON MALL, SUITE 914
FRESNO, CA 93721
TELEPHONE (209) 264-3078

512 N. IRWIN, SUITE A
HANFORD, CA 93230
TELEPHONE (209) 582-2869

MERCED
TELEPHONE (209) 384-1194

Assembly
California Legislature

JIM COSTA
ASSEMBLYMAN, THIRTIETH DISTRICT

Chairman
ASSEMBLY DEMOCRATIC CAUCUS

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~~California Debt Advisory~~
Commission
Legislative Advisory Committee,
Wildlife Conservation Board

May 2, 1991

The Honorable Bill Bradley
Chairman, Water & Power Subcommittee
United States Senate
731 Hart Senate Office Building
Washington, D.C. 20510

Dear Senator Bradley:

Thank you for the opportunity at our recent meeting to discuss various water issues that are vital to our region and the state.

Our discussions concerning S. 484 were both frank and substantive. In that regard, we would like to reiterate as well as further amplify on some the points that we raised during our conversation.

As we emphasized to you, we share your concerns about the need to resolve the fish, wildlife and related environmental problems in California's Central Valley. However, we are concerned that your legislation will achieve its intended purpose at the expense of severe and unnecessary regional economic disruption.

Residents of the Central Valley rely heavily on the Central Valley Project (CVP) as a vital component of the area's economy. This investment by the federal government has directly contributed to fostering one of the most successful agricultural regions in the world. In return for a constancy of water supplies that the CVP has provided, thousands of farming operations of all sizes have been established and billions of dollars of private investment have been stimulated, which has resulted in an unrivaled supply of abundant and inexpensive food and fiber for the nation as well as international markets.

However, it is certainly not just farmers that benefit from the CVP, but also farmworkers, industries and small businesses as well as entire communities throughout the valley. A significant curtailment in water supplies will have a rippling effect of immense proportions, impacting not only individual farmers and valley towns and cities, but the overall California economy, including the food budgets of urban consumers.

The Central Valley simply cannot afford to lose the water supplies reliability that has been ensured historically by the Central Valley Project.

At the same time, we are not ignoring the environmental issues raised by the CVP. As you are aware, the formation of the San Joaquin River Management Program represents one of the most significant steps that the State Legislature has taken to address these problems. This program recognizes the diversity of factors that has contributed to the decline of the San Joaquin River and it has established a process for bringing together the various interest groups in order to identify permanent and long term solutions.

The approach that is being used for the San Joaquin River is patterned after the highly successful Sacramento River Restoration Task Force, which has completed a thorough review and its findings are now before the Congress for its consideration. We are confident that the success of the Sacramento River Program can be duplicated by the San Joaquin River Management Program.

We understand that plans to conduct a hearing on S. 484 in the Central Valley have been cancelled. In light of this decision, we believe it would be worthwhile for a member of your staff to come to this area and visit some of our communities and engage in discussions with the people that will be directly impacted by your legislation.

We hope to work with you to revise and improve your measure so that it can enjoy a broad base of support. Thank you for your consideration in this matter.

Sincerely,

JIM COSTA
30th District

RUSTY AREIAS
25th District

BILL JONES
32nd District

1709 Meadowlark Way
Roseville, CA 95661

April 25, 1991

Senator Bill Bradley
U.S. Senate, SH-731
Washington, D.C. 20510

Dear Senator Bradley:

The views and information presented herein are respectfully submitted in opposition to Senate Bill 484 - The Central Valley Project Improvement Act. I believe that the harmful effects of the proposed legislation should be more carefully considered before enactment of legislation that would reduce agricultural production.

I am not a practicing farmer, but rather a semi-retired agricultural economist who has spent many years studying and analyzing the agricultural economy of California's Central Valley. Analysis of SB 484 leads me to believe that it would reduce agricultural production, which would be detrimental to the Nation, State and local area.

Improvement of the environment is desirable, but it should be remembered that redirection of irrigation water supplies away from agriculture will have negative effects upon people, which may surpass the beneficial effects for the environment. I have found that the Central Valley Project subsidizes the U.S. Treasury and many other governmental units, rather than the other way around, as is often claimed.

Bureau of Reclamation crop reports indicate that lands receiving a full or supplemental irrigation water supply from the Central Valley Project produced crops valued at more than $3 billion in 1985 alone. Similar production levels are realized each year and will continue as long as the project is in operation. Federal income taxes from such production would repay the total project cost in a short time, and have probably repaid the government's investment in project facilities several times already during the 50 years of project operation. It is realized, of course, that irrigation water alone does not produce crops nor the income indicated above; however, very little crop production would occur in the project service area without irrigation.

In addition to Federal income tax enhancement, the project also provides direct increases in state income taxes and local property tax revenues. The latter is realized by broadening the tax base through increased land values and on-farm investments in homesteads, equipment, and supplies as well as permanent plantings such as orchards and vineyards. Investments range from a few hundred dollars per acre for dry-farmed land to several thousand dollars per acre for irrigated land in the project service area.

In addition to direct tax increases discussed above, significant off-farm economic linkages result from project operation which also contribute to Federal, State and local tax revenues. The idea that specific changes in farm production will "ripple" through the economy is generally understood and accepted. For example, commodities such as canning tomatoes, pears, and other fruits and vegetables which are produced in abundance on project farms not only provide income for the farmers. They also produce economic activity and employment in the processing, transportation, and retailing industries, as well as others. Input-output models are considered to be one of the more reliable indicators of this so-called ripple effect.

In 1980 the California Department of Water Resources published the results of an exhaustive array of input-output studies prepared by the Department. From those studies, multipliers were derived that can be applied to gross returns of Central Valley Project crops to determine the ripple effect of those crops. The multipliers may be found in the Department's Bulletin 210, titled "Measuring Economic Impacts, the Application of Input-Output Analysis to California Water Resources Problems," published in March 1980.

Application of the multipliers found in Bulletin 210 to the Central Valley Project crops' incomes demonstrates the ripple effect creditable to the Project. Application of the appropriate multipliers to gross returns from the individual Central Valley Project crops reveals that approximately $3 billion in crop values (as reported in Bureau of Reclamation crop reports for 1985) increased to about $9.4 billion as it "rippled" through the economy. The multipliers which were used reflect not only the inter-industry direct and indirect effects, but also induced effects resulting as income is earned by households and in turn re-injected into the economy in the form of personal consumption expenditures. Of course, Federal, State, and local taxes are all paid at every level where additional income is generated.

In addition to the direct, indirect, and induced economic effects which are included in the above evaluations, another category also exists. This additional category includes the backward-linkages which represent economic activity generated by the farms before the crops are harvested. It includes purchases of goods and services for crop production. Such items include fertilizers, spray and crop dusting materials, fuel, seed, farm machinery, and payment for custom operations. Although these backward-linkages support large amounts of farm-related business activities, no monetary measure is available for their evaluation. Nevertheless, Federal, State and local taxes are paid by all of them.

In addition to increasing tax revenues through economic activity as discussed above, the project also produces thousands of jobs, which reduces governmental payments and expenses for various programs such as welfare, housing the homeless, medical aid for the indigent, public safety, etc.

Reliable information on labor requirements for Central Valley Project farms is not available. Different crops have varying labor requirements, most of which are seasonal in nature and difficult to equate to full-time job equivalents. However, it is apparent that the thousands of farms which receive irrigation water supplies from the Central Valley Project do indeed employ substantial numbers of workers. These jobs are in addition to the off-farm employment.

Labor requirements for off-farm agriculturally related activities amounted to almost 9,000 person-years for the Central Valley Project in 1985. Measurement of labor requirements through off-farm economic linkages is possible by use of multipliers from California Department of Water Resources input-output models and crop values reported in the Bureau of Reclamation's crop reports for the Central Valley Project.

The off-farm labor requirements for each crop, based upon each million dollars of farm production, are found on page 100 of the California Department of Water Resources Bulletin 210, as already referenced above. The indicated labor requirements represent the totals through all processing and trade channels after the commodities leave the farm.

The above discussion focused only on revenues and financial aspects of project development. However, many other significant benefits of a more intangible nature also accrue to the water users, the local community, and the entire nation. Although they are not readily measureable in monetary terms, the intangible effects are very real and should be included when measuring the worth of irrigation developments. The project's contribution to a favorable balance of trade should not be overlooked when counting the intangible effects.

Sincerely yours,

Raymond W. Gaines

Raymond W. Gaines

RWG/sv

Statement Submitted Before Senator Bradley Hearing on Senate Bill 484 - CVP Improvement Act Sacramento, California

May 2, 1991

My name is Clifford E. Trotter. I am the Engineer-Manager of the Arvin-Edison Water Storage District.

Arvin-Edison serves 132,000 acres of prime agricultural land in the southeastern portion of the San Joaquin Valley. The District's primary source of water is from the Federal Friant-Kern canal. A portion of that supply is exchanged for Federal water originating in the Shasta-Trinity system, a major component of the Central Valley Project. That exchange water, when released from Shasta, flows through the Delta before being conveyed by the State aqueduct and Cross Valley Canal to Arvin-Edison. Nowhere in the reclamation west has the importation of water had a more profound effect on a community than in Arvin-Edison, where, prior to the importation of Federal water, farmland was being abandoned as groundwater supplies diminished. Any reduction in Arvin-Edison's water supply, which would most certainly occur if your Bill is implemented in its present form, would have a catastrophic affect on our community including a substantional loss of jobs.

Your Senate Bill 484 - CVP Improvement Act, can be characterized as "Too Much, Too Soon". We believe that all of the Federal and State water interests, whose water is conveyed through the Delta, recognize that there are many problems associated with the Delta and other State waterways that must be solved in such a way that their water supplies and the Delta are protected. Your S 484 includes what we believe are drastic measures that have the potential of disrupting the urban and agricultural water supplies and could result in a breach in a commitment by the United States to maintain and renew contracts with entities supplying water to a very large portion of the State.

We also believe that there are many current activities such as the ongoing Bay-Delta Hearings that are addressing many of your concerns. Logically, the results of these activities should be known before proper measures can be devised to remedy Delta problems. It very well might be that some of the measures suggested in your Bill will eventually be implemented but it is too soon to tell.

We look forward to working with you concerning this most important matter.

Phone (916) [illegible]

Irrigation Water

FEATHER WATER DISTRICT

280 Wilkie Avenue
YUBA CITY, CALIFORNIA 95991

May 1, 1991

Senator Bill Bradley, Chairman
Subcommittee on Water and Power
SH-212
U. S. Senate
Washington, D.C. 20510

RE: Senate Bill 484 - Feather Water District

Dear Senator Bradley:

The Board of Directors of the Feather Water District, in Sutter County, California, is greatly distressed to learn of certain provisions in proposed Senate Bill 484, which if enacted into law, could have devastating economic effects on the established agricultural economy in the Feather Water District.

More than 150 families own and farm approximately 8,000 acres in the District which is located approximately ten miles south of Yuba City, California, along the west bank of the Feather River. Until the 1950's, the farms within the District produced irrigation-intensive crops from a ground water supply, but that source became unusable in the 1950's by reason of excessive salinity. In 1962 the District: (a) entered into a water supply contract with the U. S. Bureau of Reclamation for a 20,000 acre feet per annum water supply from the Central Valley Project, and (b) in that year and subsequently, entered into long-term USBR loan repayment contracts totalling in excess of $2,000,000, to construct diversion plants and pumps in the Feather River, a water distribution system, and a drainage system. In reliance on this water supply, a thriving agricultural economy has continued to exist in the Feather Water District, and the more than 150 families are farming fruit and nut crops, melons, tomatoes and other row crops and grains.

The District's water supply contract expires in 1994, but with a right of renewal upon mutually agreeable terms. The District's loans for the water and drainage systems are about 80% paid off, but with several more years to go.[1] It is, of course, essential that the water supply contract be renewed in 1994, upon its expiration, so that the area's economy can continue, the District can continue its loan payments, and the families and landowners in the District can continue their farming livelihood. The importance of the District water supply was dramatically illustrated during the current drought conditions. In 1990, Feather's 20,000 acre foot CVP supply was reduced 50%, to 10,000 acre feet; and in this year, 1991, the CVP supply has been reduced 75%, down to 5,000 acre feet. As a consequence, the District is struggling to keep alive perennial crops within the District on a very small quantity of water. The limited ground water supplies available in the District are of poor quality, and they are completely inadequate to sustain the agricultural economy in the District.

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[1] The District, at the invitation of the U.S., "purchased" the USBR loans a few years ago, but is still indebted under the refinancing arrangements.

The Board of Directors of the Feather Water District strenuously opposes reinventing the purposes of the Central Valley Project at this late date, particularly as to Districts which have established their economies in reliance on the availability of the water supply. There may be reasons for a different approach as to new contracts for the non-contracted firm yield of the CVP, but there is no justification for interfering with the renewal of existing contracts, which the District justifiably believed would be done in the ordinary course of business, until after newly adopted Project objectives are accomplished, which may take many, many years.

The California State Water Resources Control Board has over the years held numerous and extensive hearings and is still holding hearings, relative to the need for and kinds of protection appropriate for fishery and wildlife in the California Central Valley, and has already adopted numerous specific terms and conditions upon the permits of the U. S. Bureau of Reclamation for the appropriation of water for its operation of the Central Valley Project (the Board has also imposed corresponding conditions on the operation of California's State Water Project), and will be updating those terms and conditions, to provide such protections. These terms and conditions, as well as other ongoing environmental preservation programs in the State, will provide well-considered and substantial protection to fishery and wildlife interests in the Central Valley and in the Sacramento/San Joaquin Delta.

The language of the Bill seems clearly to provide excessive additional protection to fishery and wildlife interests, at the expense of existing economies. While Feather Water District has no objection to efforts to preserve and enhance the fishery and wildlife resources of California, we think in this Bill the pendulum is swinging too far in that direction.

Very truly yours,

FEATHER WATER DISTRICT

By Francis K. Silva
Francis K. Silva, Manager & Secretary

cc:Hon. John Seymour, U.S. Senator
cc:Hon. Pete Wilson
cc:Hon. Douglas Wheeler

STATEMENT OF THE
TEHAMA-COLUSA WATER USERS ASSOCIATION
ON THE
CENTRAL VALLEY PROJECT IMPROVEMENT ACT (S. 484)
PRESENTED TO
U. S. SENATE WATER AND POWER SUBCOMMITTEE
MAY 8, 1991

The membership of the Tehama-Colusa Water Users Association consists of water agencies in the Northern Sacramento Valley, which represent about 156,000 acres of irrigable land. Among the Association's members also are County governments in the area, and water agencies which provide water to federal wildlife refuges. Most of the member districts still have sizable debts to repay, some to the United States, for the construction cost for their distribution systems, as well as for the United States' investment in the Central Valley Project features. Because of the relatively recent completion of the Corning and Tehama-Colusa Canals, many member districts' contract water supplies are inadequate to serve their entire territories due to delays since 1978 in the Bureau of Reclamation's contracting. This has left these agencies with pipelines in the ground, but insufficient water to serve all the property intended.

First we must urge that the Committee follow through on its commitment to conduct a hearing on this legislation in the area affected, that is, in the Central Valley. The people who are most directly concerned deserve the opportunity to be heard, and hearings in Los Angeles or Washington are not suitable.

Because the Tehama-Colusa and Corning Canals begin at the Red Bluff Diversion Dam, which has been the focus of a great deal of study and concern with respect to the fishery resources in the Sacramento River, and because our water users are citizens of the Central Valley, the Association has participated in development of the Upper Sacramento River Fisheries and Riparian Habitat Management plan, and in the other similar actions taken in recent history to address fish and wildlife concerns in our area. S. 484 is implausible in that it tries to separate out the impacts the CVP has had on fish and wildlife, at a time when most credible experts have accepted that many other factors have contributed to the circumstances that exist today.

Moreover, S. 484 will directly impact the livelihoods of our water users, and a huge percentage of our communities. Its broadsword approach to legislate biological changes is likely to have drastic effects on our area on many levels:

1. By diminishing the term of future water contracts from long-term agreements to one-year ones, the Bill threatens both a loss of our present stable, reliable water supply, and any remaining hope that those districts which have not yet been allowed to contract for an adequate supply will ever be able to do so in the future. This reduction in a key raw material in our most important industry will ripple through our economy. The people who will be hurt the most are the wage earners hired by farmers and the businesses

that support them, and are the people at the lower end of the economic scale. But, the effects of S. 484 will reach beyond the employees of farmers and their suppliers, into the hospitals, school districts and libraries of our communities. Two weeks ago a local newspaper reported that the unemployment rate in Colusa County is 25.4%, the highest in the State, and neighboring counties are suffering equally shocking sums. At a time of year when such rates normally drop, as farmers begin seasonal hiring, the effects of the drought are palpable. S. 484 will impose a legislated drought that will continue indefinitely.

2. The Association's member agencies will be unable to meet their financial obligations for repayment of the Project. For instance, the most equitable way for a district to spread the repayment of construction costs is by assessing the land. S. 484 would disrupt this process with its 25% limitation on revenues from fixed charges. Then the Bill reduces the water supply for sale, too, and frustrates the only other means for the district to raise money to meets its obligations. Even if the provisions calling for water surcharges for the other purposes of the Bill do not raise the price to an unaffordable level, with a reduced supply to fund repayment, the water price will certainly then exceed ability to pay.

To be fiscally responsible, we suggest that the Committee should commission an economic study to determine the effect on project repayment of the Bill. The study should also address the loss of value represented in the change in water contracting, reliability of supplies and other conditions which S. 484 mandates, all of which have a discernable economic cost. Every water agency adversely affected economically by the legislation should receive an equitable adjustment in its repayment obligation equivalent to the loss in value. In short, if the districts and their farmers are not going to receive what the United States promised in inducing them to enter into what once were long-term, renewable and dependable water service agreements, on which the districts and individual citizens based their decision to encumber themselves and their lands with these obligations, they should be relieved of those liabilities. If they will not be, then we ask the Committee to provide us its explanation of how that is a fair and appropriate way to treat people who have entered into agreements with the United States in good faith. But the Committee should recognize that the farmers' commitments were for the long term, and so it is not acceptable simply to say that "things have changed since then".

3. The Bill's provisions requiring a district to forgo a percentage of its current water supply in exchange for a longer term for a renewed contract are ludicrous for agencies whose contracts are already inadequate. Is it reasonable or equitable to require those districts which only have 50 or 60% of an adequate supply under contract now to reduce that by the percentages demanded in S. 484 when those contracts are renewed?

4. As we witnessed with development of the California State Water Bank this year, and have seen consistently in connection with all manner of water transfer proposals over the years, there is no consideration given to assuring that our rural communities are not destroyed by transfers of a public resource to the highest bidder.

Additionally, the Bill does not consider the effect on a potential transferor district of the 25 percent surcharge on its ability to meet its financial obligations. In fact, this arbitrary tariff will be an impediment to water transfers, except to the wealthiest urban users who will be able to pay enough that the transferor can meet its obligations after deduction of the surcharge. Moreover, while the Bill gives a transferring district relief from "avoided" O&M costs, the next sentence raises the cost of the rest of its supply to provide a "reserve". Where is the incentive to conserve or transfer water if by doing so the cost of the remainder rises punitively?

Curiously, S. 484 acknowledges various provisions of California law, but then totally ignores it with respect to groundwater control. How can a district enforce the groundwater and surface water delivery system metering requirements within its boundaries, with no legal authority under the State laws governing it? Additionally, the Bill would require metering even of every household well and farmers' on-farm water systems, which serves no identifiable federal interest. The Bill does not even require that the meters be read or maintained, nor does it address what is to be done with the information if they are.

Finally, we suggest that the Bill is too narrowly focused with respect to transfer of the CVP. It has long been the practice of the Bureau of Reclamation, consistent with Congressional directives, that projects are turned over to the water users once constructed, and the CVP should be treated no differently. Most of our members are also a part of a governmental entity which has assumed operation and maintenance of the two canals which serve us. The success of such moves should be the model for a transfer of the entire project, so that the people paying the bills are the ones responsible for running the project.

Our Association has long been on record in support of the basic principles of the Upper Sacramento River Fisheries and Riparian Habitat Management Plan. We have often and again today urge that legislation to enact and fund the steps called for by that Plan should be adopted without delay. Just because S. 484 is only generally directed to that end does not, however, make S. 484 good legislation. On the contrary, S. 484 is so broad, and so damaging to the relationship between CVP contractors and the United States, that it threatens to undermine progress already made toward fish and wildlife restoration, and results in it being the kind of defective legislation which not only hurts people unnecessarily, but also subverts their willingness and ability to cooperate in making real advances in improving those resources in the Central Valley.

Our Association is disturbed and disappointed that the sponsors of S. 484 did not learn from our experience last year. Not only did we get nowhere with legislation like this in 1990, but we have lost yet another year in our effort to achieve an improvement to the fish and wildlife problems we all recognize. It is fine to wish that we could do everything at once, but the reality is that we cannot, and those who suggest that we should try have caused us to be able to do almost nothing at all.

PUBLICATION LOS ANGELES TIMES

DATE March 28, 1991

Farmers Also Face a Loan Drought

By MARIA L. La GANGA
TIMES STAFF WRITER

Agricultural lenders are tightly linking water availability to operating loans for the first time this planting season, making California farmers pass stiff water tests to get money to plant their crops.

With state water deliveries to agriculture cut out entirely and federal deliveries trimmed 75%—reductions that are still in place regardless of recent rains—agricultural lenders are cutting back on their loan portfolios as farmers are forced to idle acreage.

Banks and other financial institutions that lend money to farmers contend that the drought will not affect their stability. They also say that agricultural credit has not tightened. But since the farm crisis of the early 1980s, total farm lending has indeed dropped: from $12.8 billion in California in 1984 to $9.8 billion in 1989.

"Just the promise of impending drought has made farm creditors retrench," Herbert Aarons, president of California Coastal Rural Development Corp. in Salinas, said during a recent congressional hearing on the health of

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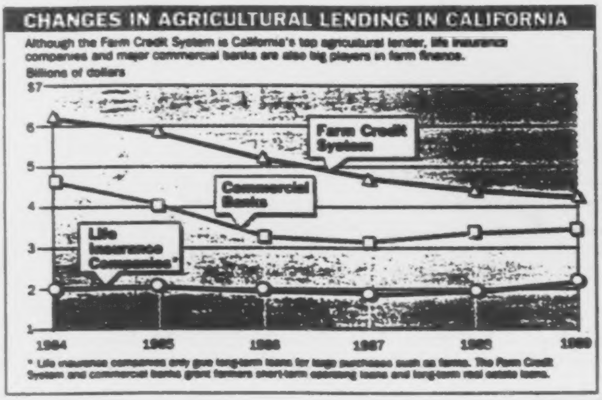
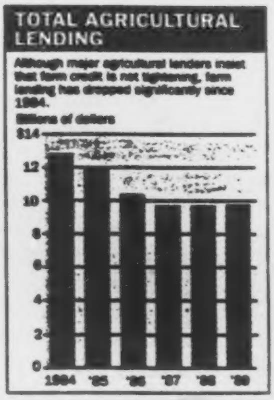

CHANGES IN AGRICULTURAL LENDING IN CALIFORNIA

Although the Farm Credit System is California's top agricultural lender, life insurance companies and major commercial banks are also big players in farm finance.

* Life insurance companies only give long-term loans for large purchases such as farms. The Farm Credit System and commercial banks grant farmers short-term operating loans and long-term real estate loans.


TOTAL AGRICULTURAL LENDING

Although major agricultural lenders insist that farm credit is not tightening, farm lending has dropped significantly since 1984.

Source: US Department of Agriculture Economic Research Service

Continued

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DATE March 28, 1991

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farm credit nationwide.

In fact, the California drought highlights the problems of agricultural lending throughout the country, a system dating from the 1930s and based on the belief that keeping family farmers in business is in the best interests of the nation, said Rep. Glenn English (D-Okla.), chairman of the House Agriculture subcommittee on conservation, credit and rural development.

"If farmers can't get credit and are forced out of business, that defeats the overall national objective," English said in an interview. "Still, a person can say that we have bad weather conditions from time to time, that farmers in California should take that into consideration, and if they go out of business, it's bad management."

The drought's effects are evident in financial institutions throughout the state, as lenders take measures to reduce delinquent loans and brace for cutbacks in lending. Longtime lenders—and longtime farmers—say the current drought is the first time that they have seen the following:

- Bank of America is demanding a full accounting of how much water growers need, where it will come from and whether they can get it in time to use it. Although planting season began this month, the bank asked for this information last August. The institution has already turned down a few farmers because of a lack of water.
- At the Bakersfield Production Credit Assn. and Federal Land Bank, loan volume is down between 8% and 10%, Chief Executive Mark Carlton said. The reduction is directly related to the drought, he said.
- The Fresno-Madera Production Credit Assn. recently began demanding well tests for farmers with marginal water supplies. All farmers must fill out complicated water questionnaires before loans are granted.

"The drought is going to reduce our loan volume, and if it continues, we'll have to initiate collections actions," said Red Stark, vice president and branch manager at the Fresno-Madera Production Credit Assn in Kerman. "I really have not turned people down because of water, but we've put more controls on loans."

The rains have not changed the agricultural lending situation, Stark said, even though reservoirs are now half full and some cities are considering cutting back on their strict rationing plans.

"Even though there's been additional rainfall, it doesn't mean additional water for agriculture," Stark said. "Most of the politicians feel that the water should go to the cities."

Agricultural loans are granted by a broad spectrum of financial institutions, with the biggest chunk of farm money coming from the Farm Credit System, a nationwide network of farmer-owned lending institutions created by Congress more than 70 years ago.

Production credit associations such as Stark's are one of the system's three main branches; they offer operating loans for planting and intermediate-term loans for equipment, livestock and other large items. Federal land banks are the system's mortgage lenders, and the Co-Bank offers loans to growers' cooperatives.

The Western Farm Credit Bank in Sacramento is the Farm Credit System's hub serving California, Utah, Arizona, Nevada and Hawaii. As of 1989, it had $4.2 billion in loans outstanding in California alone and was the top agricultural lender here.

All commercial banks combined weigh in as the No. 2 agricultural lender, with $3.3 billion in farm loans outstanding in 1989. Commercial banks give both operating and real estate loans to farmers. Wells Fargo has the largest agricultural portfolio of any commercial bank in the state, followed by Security Pacific, Bank of America and Sanwa Bank of California.

Bank of America decided last April that the fifth year of drought would require drastic measures to minimize risk in its farm loans, so it designed a detailed water questionnaire for its farm customers and then sent loan representatives out to visit each customer personally.

The questionnaires were due back in August, because planting decisions—and loan requests—for the 1991 season were made in the final quarter of the year. The bank did not require third-party tests of wells and pumps, but it was very interested in such information if it was available, said Terry W. Scranton, senior vice president for commercial banking in Fresno.

"We did a very thorough quantitative analysis of the water delivery, not just how deep is your well and how good is your water table," Scranton said. "If your growing period is 150 days, you have to get the necessary amount of water on your crops in 130 days. If you get it in 210 days, you've got a problem."

Although most of the bank's farm customers are managing to stay in business and receive some operating money, Scranton said that in his 22 years with Bank of America, 1991 is the first time he has seen farmers' loan requests turned down for lack of water.

At Sanwa and Wells Fargo, loan departments are not requiring written water questionnaires. But Wells Fargo is scrutinizing each of its 900 customers individually with an eye to water availability. That has not changed because of the March rains. Sanwa is doing much the same.

The drought's effects are evident in financial institutions throughout the state, as lenders take measures to reduce delinquent loans.

"In 1991, everyone's focusing on water for obvious reasons," said William Scarborough, vice president and loan supervisor in agribusiness banking at Sanwa. "It becomes a key element. . . . And if they don't borrow as much, we don't make as much interest income. What degree over last year is too early to tell."

What this means for growers is a double drought—less water and less money with which to plant crops. It also means less money to pay fixed costs such as insurance, mortgages and equipment loans. Only two things are on the increase—headaches and paperwork.

George C. Papangellin is assistant general manager of Stamoules Packing Co. and S&S Ranch in Mendota. In his nine years in farming, Papangellin said, he has never had a banker ask outright if he had enough water to grow his crops.

Until now. Today, bankers are asking how many wells farmers have, whether those wells are on owned or leased property, how deep they are, whether they're up and running. "If you're in dire straights," Papangellin said, "they may get into even more detailed questioning."

"We used to have cash-flow budgets," said Red Cardella, co-owner of Cardella Ranch in Firebaugh, Calif. "Now the banks are requiring us to have water budgets. They want to know how well your pump's working, what water district you're in, and they want a water budget."

So Cardella gave them a detailed spreadsheet, whose most telling figure is a tiny "-2,234." That number stands for how many acre feet of water he'll probably be short. And it translates into no cotton, fewer tomatoes, fewer onions, about 1,400 idle acres, a much smaller loan from his bank and about $250,000 that he'll be in the red.

"I think the banks will take advantage of this," Cardella said. "They know it isn't a year to shop around [for loans]. Maybe they're justified. The risks are so great."

MAJOR U.S. AGRICULTURAL LENDERS

Because agricultural banking is much more centralized in California than in other parts of the country, the state's Top Five farm lenders are also the nation's.

Rank	Bank	Location	Dollars
1	Western Farm Credit Bank	Sacramento	$4.3 billion
2	Wells Fargo Bank	San Francisco	$885 million
3	Security Pacific	Los Angeles	$861 million
4	Bank of America	San Francisco	$830 million
5	Sanwa Bank of California	San Francisco	$363 million
6	Seattle-First	Seattle	$338 million
7	Security Pacific	Seattle	$336 million
8	Valley National of Arizona	Phoenix	$311 million
9	West One Bank	Boise, Ida.	$280 million
10	US Bank of Washington	Seattle	$238 million
11	United States National Bank	Portland, Ore.	$224 million

Source: Sheshunoff Bank Quarterly, June, 1990, ratings, and the Western Farm Credit Bank

Conclusion

PREPARED STATEMENT OF JIM COSTA, ASSEMBLYMAN, CALIFORNIA LEGISLATURE

Mr. Chairman and Members: Thank you for the opportunity to again come before this committee to discuss S. 484, the Central Valley Project Improvement Act.

Because this measure will have such a significant and potentially devastating effect on the district and region that I represent, I felt it was important that I reemphasize the concerns of my constituents as well as discuss how it can be more of a positive factor in addressing the environmental issues of the Central Valley.

Residents of the Central Valley rely heavily on the Central Valley Project as a vital component of the area's economy. This investment by the federal government has directly contributed to fostering one of the most successful agricultural regions in the world. In return for a constancy of water supplies that the CVP has provided, thousands of farming operations of all sizes have flourished and billions of dollars of investment have been stimulated, which has resulted in an unrivaled supply of abundant and inexpensive food and fiber for the nation as well as international markets.

Mr. Chairman and members, I applaud the intentions and goals of this proposal—believe me, my constituents and I and the people of the San Joaquin Valley want clean water and air, open space, and abundant wildlife resources as much as anyone.

My concern regarding S. 484 is certainly not with its objective. Rather, it is with its premise and how that objective is going to be achieved.

The decline of the fish and wildlife population in the Central Valley is the result of a variety of complex factors. There is no one single culprit that has caused this problem. To place the entire burden on the Central Valley Project is simply misguided. But more importantly, to advocate restricting water deliveries in the manner that is proposed in this legislation will have a rippling effect of immense proportions, impacting not only individual farmers and valley towns and cities, but the overall California economy, including the food budgets of urban consumers.

Your goal, Mr. Chairman, may be achieved, but the cost will be unacceptable. To many, it seems like a case of the proverbial throwing the baby out with the bathwater.

Rather, I strongly believe that the thrust of S. 484 should be to foster, support, and cultivate the various existing programs (as well as proposals) that have been established to deal with the problems of water quality and diminishing wildlife resources in the Central Valley; efforts that are based on consensus-building, cooperation, and locally-based solutions.

If I could underscore one point today, it is that S. 484 is proceeding in the wrong direction by imposing requirements that resemble a sledge hammer approach rather than encouraging locally initiated solutions to flourish and expand.

During the remainder of my testimony, I would like to briefly discuss some of the more significant of these programs and proposals.

SAN JOAQUIN RIVER PARKWAY

Here with me today is Mr. Dave Koehler, executive director, San Joaquin River Parkway and Conservation Trust, who will present a short slide presentation on the San Joaquin River Parkway. Considerable efforts are currently underway, including state funding for a comprehensive plan, to develop a parkway along the San Joaquin River from Friant Dam to highway 99 in Fresno and Madera counties.

DIVERSION OF MADERA IRRIGATION DISTRICT WATER

The Madera irrigation district has proposed that with certain operational changes increased water flows could be made to the San Joaquin River with district water. Under this proposal, district water would be conveyed to the San Joaquin River rather than to the Madera Canal.

The district has proposed siting a pumping plant on the San Joaquin River (located slightly upstream from the highway 99 bridge) which would provide water to a 20,000 acre service area, principally consisting of vineyard and nut tree operations.

The plant would operate during the peak irrigation demand months, and would have an approximate discharge rate of 50 cubic feet/second maximum. during the proposed operating period, 9,000 acre-feet would be released from the Friant Dam and Millertom Reservoir to the San Joaquin River for subsequent diversion by the district. It is estimated that these diversions would increase historical river flows by 25-40 percent during the summer months.

The cost of such a multiple pump facility is projected to be approximately $1.2 million, which is, unfortunately, far beyond the funding capacity of the district.

GRAVELLY FORD WATER BANK

The Department of Water Resources has initiated a preliminary analysis of releasing water from the Friant Dam in order to provide groundwater recharge in the Gravelly Ford Water District. It is anticipated that this project would have three significant benefits: (1) environmental enhancement of the San Joaquin River; (2) reduced ground water pumping costs to local users due to the elimination of agricultural irrigation at the project site; and (3) increased firm yield of the Central Valley Project at some undetermined level. Further study of the feasibility of this proposal may be undertaken by the department.

SANTINA PROPOSAL

Contaminated drainage water is a major problem in the Central Valley. Selenium contamination affects up to one million acres or 10 percent of California's irrigated farmland. To attack this problem a project is being developed in California to test a continuous process for removing selenium from contaminated agricultural drainage water. The partners in this project are Santina Water Company (a private firm), Firebaugh Canal Water District, California State University, Fresno, and California Department of Commerce.

In this project, a patented and laboratory proven process for selenium removal will be tested in a pilot plant. The process uses reverse osmosis as well as the addition of chemical solvents to clean the drainage water. One of the goals of the project is to reduce the selenium concentration from approximately 200 parts per billion to less than 10 parts per billion. Cogeneration of electrical power and the production of drinking water promise to be significant by-products of this project.

WATER PURCHASES TO IMPROVE SALMON MIGRATION

In the fall of 1988, the California Department of Fish and Game developed and implemented an innovative solution to the drought related water supply problems facing waterfowl and salmon.

Flows for migrating salmon on the Stanislaus River were insufficient to accommodate the returning run of the adult fish. Water supplies for the grasslands marsh complex were inadequate to support the fall flight of waterfowl. In addition, the prospects for adequate flows for outmigration of juvenile salmon in the San Joaquin River were considered poor.

To address these problems, the Department of Fish and Game purchased water from the new Melones Reservoir and it was released in the Stanislaus River on a schedule designed to encourage adult salmon to spawn upstream. This water was then pumped through the delta and transported to the grassland marsh area where it was used for marsh management.

In the spring of 1989, water was released to the San Joaquin River during a two week period to enable juvenile salmon to migrate to ocean waters. At this same time, water ponded on the grassland marsh complex was drained to augment drought reduced flows.

The results of this water flow augmentation were quite successful, with wetland habitat enhanced and salmon migration improved.

WATER TRADE ON THE SAN JOAQUIN RIVER

(Possible point for discussion).

MONO LAKE PROPOSAL

(Possible point for discussion).

Proposal by the state lands commission for the retirement of farm land containing high levels of selenium and possible water transfers.

SAN JOAQUIN RIVER MANAGEMENT PROGRAM

The San Joaquin River Management Program was created by state legislation and provides a forum whereby information can be developed and exchanged for the orderly development and management of the water resources of the San Joaquin river system.

The legislation required the formation of an action team and an advisory council. The action team serves as a working group to identify actions which can be taken to benefit appropriate uses of the river system. The role of the advisory council is to review and approve recommendations presented by the action team. The council is composed of representatives from public agencies, private entities, environmental groups, water agencies, flood control districts, and other interested parties.

The program participants are working to develop various river system improvements in flood protection, water supply and quality, fishery and wildlife habitat, and recreation needs.

As you can see, Mr. Chairman and members, there are an array of various programs and projects with many dedicated individuals and groups committed to improving environmental conditions in and along the San Joaquin river system. Let us all join forces in a cooperative effort to achieve that goal. Thank you.

PREPARED STATEMENT OF BILL JONES, ASSEMBLYMAN, CALIFORNIA LEGISLATURE

Good morning, my name is Bill Jones. I represent the 32nd Assembly District which is located in the central San Joaquin Valley and includes parts of Tulare, Fresno and Madera Counties and all of Mariposa County.

OVERVIEW OF THE CENTRAL VALLEY PROJECT IMPROVEMENT ACT

The purpose of the Act is to promote and expand the authorized purposes of the federal Central Valley Project. The bill establishes certain rigid conditions, namely fish and wildlife qualifications, which must be satisfied before the Secretary of Interior can sell or deliver water from the CVP under contract or other agreement.

While I support initiatives aimed at restoring fisheries and other environmental benefits, the legislative approach offered by Senator Bradley ignores the need to balance legitimate human and environmental needs.

The introduction of S. 484 shows insensitivity to the condition in which California is currently experiencing. The state is reeling in its fifth critically dry year. Strict water rationing efforts are going into affect statewide. Agriculture water deliveries from the State Water Project have been suspended.

The majority of Central Valley Project agricultural water contractors are taking their second straight year of water deficiencies; many have received cuts of up to 75 percent.

The California State Water Resources Control Board, very much aware of the delicate balancing act needed to manage the state's water supplies, is in the process of deciding the Bay-Delta water quality hearings. The proposals contained in S. 484 are premature in light of the above efforts currently under way by the state.

IMPLICATIONS OF S. 484

The limitation of long-term water contracts to a period of one year, or 10 years if supplies are reduced, could hamper the ability of agricultural water users to remain viable.

Crop years do not necessarily follow water years. Constant disruptions in the surface water supply would decrease a farmer's ability to adequately plan his farming operation from year to year.

Most agricultural lending institutions consider the dependability of a farmer's water supply when granting loans. Your bill removes this confidence from agriculture by withholding long term contracts.

Agriculture is the leading industry in many smaller Central Valley towns. The combined effects of the freeze and drought are already manifesting themselves in unemployment and public assistance lines. Additional threats to the economy would be most disruptive.

One-year contracts would be equally disruptive for urban users. It is not fair to make long-term water contracts available only on condition that water users give up a portion of their supplies.

Special 20-year contracts for urban users are unfair, particularly when agricultural water users take the first cut anytime the water supply is short.

Barring the sale of the uncontracted firm yield of CVP water until such time that the Acts's fish and wildlife and water quality improvements are enacted is both unfair and unrealistic.

FISH AND WILDLIFE RESTORATION OBLIGATIONS

Fish and wildlife already constitute a beneficial use of water and are a designated project purpose of the CVP. Yet, the formation of the Central Valley Project Restoration Trust is premature considering the programs under way currently in the state. A state law establishing the San Joaquin River Management Program provides for investigation and research into the decline and restoration of the San Joaquin River and its tributaries. A similar state law establishing the Upper Sacramento River Task Force provides for investigation and research into the decline and restoration of the Sacramento River and its tributaries. Further, another proposal being offered—called the California Central Valley Fish & Wildlife Act of 1991—has great potential to, someday, actually deal with many of the Fish & Wildlife concerns.

These two efforts should be granted the time to conduct the research and present findings prior to federal intervention. In fact, I invite you to participate in our process.

The bill assumes that the construction and operation of the CVP is the primary contributor to the decline of fish populations and wildlife enhancement, when there are numerous factors to consider. The decline in fish populations could be attributable to commercial fishing, logging, mining and the subsequent runoff from those operations, Indian river water and fishing rights, and numerous other factors.

Since the construction of the CVP and other water development projects, there is more water released down those rivers and flowing out of the Bay-Delta Estuary than there would be under natural, pre-project conditions. To that extent, the projects may have contributed to the maintenance of certain fish species rather than the decline.

The surcharge required of the water and power customers to help restore the valley's fish, plants and wildlife is simply not fair. Thirty million dollars a year charge translates to about a $7/acre-foot increase forcing water users to pay more for less.

In summary this is not just a water issue of rural America versus urban America, its an issue of taking water from people in one region and foreclosing on its present and future development, upon which existing financial and business institutions rely, and using that water to sustain and promote growth in another region without examining any of the social or environmental consequences.

PREPARED STATEMENT OF WILLIAM C. PAULI, FIRST VICE PRESIDENT, CALIFORNIA FARM BUREAU FEDERATION

Mr. Chairman, my name is Bill Pauli, and I am the First Vice President of the California Farm Bureau Federation (CFBF). CFBF is the largest general farm organization in California, with more than 47,000 farm families as members. We are pleased to be invited once again to present our views on the Central Valley Project (CVP) legislation you have proposed.

My objective is to build on the testimony that CFBF President Bob Vice presented three weeks ago at your hearing in Washington. At that hearing, Mr. Vice stressed four main points:

(1) S. 484, if enacted in its present form, would greatly diminish California's agricultural capacity, devastate the farmers and ranchers who have been its main investors, and cripple California's rural economy;

(2) The expense of fish, wildlife and wetlands restoration should be borne by the entire population, rather than CVP customers only;

(3) Year-to-year contract renewals will not provide the continuity and reliability of water supply that agriculture requires;

(4) Authorization of new water storage and management facilities must be a component of any legislation seriously intended to address water problems in California.

We were quite relieved to hear you say in Washington that you are willing to consider means to increase the water supply of the CVP in order to meet environmental and other needs. We had feared that was not the case. Simply put, if you rule out increasing the supply of water in the CVP, you fail to provide the resources needed to solve the environmental problems that S. 484 is meant to address.

Mr. Chairman, mandating the reallocation of water, as proposed in your bill, is not an answer. This would cripple thousands of farmers and ranchers, their employees and their families, and the myriad businesses dependent on agriculture in the Central Valley. Indeed, it would be a major blow for California's economy, the nation's food and fiber supply, and our balance of trade.

Not only would it be unwise to saddle agriculture with the entire burden of mitigating current fish, wildlife, wetlands and water quality problems, it would be unfair. Who has really caused these problems? It is every man, woman and child who eats the food or wears the fiber that is produced here. It is everyone who has benefited from river bank clearance and stabilization practices, from flood control improvements and operations, from the harvest of fish and wildlife, from gravel mining. We are all part of the problem, Mr. Chairman, not just farmers and ranchers who utilize the CVP.

In order to address the Central Valley's fish and wildlife problems we must increase the size of the water "pie," not reallocate it. And, we must do it now. Not only do we have present and future environmental concerns to deal with, we have 800,000 more Californians each and every year. It would be poor public policy indeed to allow California's population to grow so drastically without doing something about the need to keep that population fed and clothed. Even if the Central Valley's fish and wildlife problems were ignored for the next 20 years, agriculture is going to be hard pressed to maintain its current level of production. We must look ahead.

There is plenty of opportunity to develop water in California in order to address environmental problems and to provide for future growth. Of the 200 million acre-feet of water California receives during a normal year through rainfall, 75 million acre-feet flows as runoff. Less than half of the runoff has been developed. 24 million acre-feet flows unhindered through our river system and is not labeled for any use within the state's water system. Much of that water could be utilized to deal with the environmental problems we are all concerned about, and to meet the needs of California's rapidly growing population. Doing so, however, will require the development of additional water facilities.

For starters, construction of a multi-purpose Auburn Dam and completion of the Folsom South Canal should be expedited. We also recommend that the federal government consider emulating such state and local projects as the proposed Los Banos Grande and Los Vaqueros reservoirs, and the Kern Water Bank.

Increasing the supply of water in the CVP is not the sole answer to fish and wildlife problems in the Central Valley. While it can and must play a major role, it must also be integrated with other approaches. For example, incentives for water conservation, and the elimination of disincentives to water transfers could play complementary roles in providing more water for California's environmental needs and its increasing population. We would support such measures.

Until S. 484 can be amended to provide for an increase in the supply of water for the CVP, we must remain firmly opposed. In its present form, your bill would create more bureaucracy and more costs, but not a single drop of more water. In fact, I submit that some of the provisions of your bill are counterproductive to your goals. For instance: imposing a 25 percent tax on water transfers will discourage more efficient uses of water; elimination of long-term contracts will discourage investment in water conserving measures; and requiring contractors to meter ground and surface water will do nothing except impose higher costs on water users.

To summarize our position, Mr. Chairman, our main point is that all citizens bear some of the responsibility for the wetlands, water quality, fish and wildlife problems we are faced with in the Central Valley. It is important that all citizens be part of the solution, and that solution must include an increase of the supply of water in California. Agriculture is willing to do its fair share, but it should not be required to bear the entire burden.

Thank you for considering these comments. I would be glad to answer any questions.

SUTTER MUTUAL WATER CO.,
Robbins, CA, May 20, 1991.

Hon. BILL BRADLEY,
U.S. Senate, Washington, DC.

DEAR SENATOR BRADLEY: Water is FOOD. Water is FIBER. Water is ENVIRONMENT. Water is JOBS and ECONOMIC VIABILITY. Water is EVERYTHING.

The Central Valley Project (CVP) is WATER. The CVP was built and operated to serve multiple needs and interests related to AGRICULTURE, MUNICIPALITIES, INDUSTRY, and the ENVIRONMENT. The CVP has provided water supply and stability which has allowed progressive and beneficial growth to occur in California. This water use and growth has resulted from water developments supported over the years by public opinion and federal, state, and local leadership.

California is changing. Development and growth means change, and change means adjustment. Water policy is adjusting in response to popular attitudes about development and growth and natural weather conditions over which mankind has very little control.

The Central Valley Project Improvement Act (S. 484) is an indication of change and adjustment. Hopefully, it is not an attempt to change the purpose of the CVP.

Most agree that fish and wildlife in California are of concern and populations have declined. Not everyone agrees as to the full reasons for the decline. S. 484 appears to isolate the CVP as the reason.

A properly conceived and prepared and ultimately implemented S. 484 (or other legislation) will allow the political process to determine a legislative rule that has evolved thoughtfully and in an organized manner taking into account the changes and developments of the past. It cannot be properly and effectively established without CONSENSUS and without realistic CONTEXT. It cannot be practical and fair if created unilaterally and politically.

S. 484 does not, in its present form, offer a CONSENSUS change or adjustment to law and policy for the management and operation of the CVP. Much more reasonable thought, information and detailed consideration must occur before S. 484 will accomplish balanced, long-term and short-term goals and objectives for the ENVIRONMENT, INDUSTRY, MUNICIPALITIES, and AGRICULTURE.

S. 484 in its present form proposes an unacceptable remedy to fish and wildlife problems as perceived. If this remedy is implemented, a larger more difficult problem will be created for the people of California and its important and all encompassing urban, agricultural, and industrial interests.

The main weaknesses of S. 484 are as follows:

1. Section 4 of S. 484 enhances and/or creates a sense of uncertainty for economic and social planning. Recall that water is everything. The essence of water planning and guidance has been implemented through long-term water contracts. It is based on these contracts that investments are and have been made and business economies and small and large communities have been built. The provisional requirements of S. 484 as written creates more uncertainty for water users than already existent. In fact, the legislation itself depends upon the outcome of events and entities outside of its direct control (i.e., the conclusions of the Bay/Delta matters need to be resolved by the State Water Resources Control Board and the Environmental Protection Agency in order for the legislation to be fully meaningful). Uncertainty and unreliability will not help the best interests of the CVP including fish and wildlife in the longrun.

2. S. 484 contains unrealistic ground rules. As indicated in Item 1 above, it relies on outside events and regulators as a part of the legislative equation to make things work right. Additionally under Section 4 and Section 7, S. 484 essentially demands present water users to give up their present water uses while using contract renewals as the enforcement leverage, and S. 484 further requires these same water users to pay into a restoration fund for natural resources they have not fully caused to decline. The water users will be mandated to pay (disproportionately more) for less water in the future and to bear the brunt of financial and social responsibility to make the fish and wildlife environment ideally what it was more than 40-50 years ago. This demand is made while these same water users were previously encouraged by past water policy to pursue and achieve development and growth. If past incentives were wrong, could there not be new positive incentives for present water users to share even more the limited available water for fish and wildlife purposes rather than resorting to nonconsensus law to unreasonably force the matter. S. 484 should allow creative and workable incentives to come forth from consensus.

3. S. 484 does not address or offer any consideration of future water development for the CVP system and water needs in California. Clearly, S. 484 would not be at issue if there was enough water available in the State. This topic and concern will only get stronger and more complicated as population continues to grow in the state. Water needs of the fish and wildlife environment would be much more easily recognized by all if the all encompassing matter of future water development and availability were addressed as part of this legislation for balancing total water concerns and needs for AGRICULTURE, INDUSTRY, ENVIRONMENT, and MUNICIPALITIES.

4. S. 484 does not offer any indication of the true social and economic costs of real locating limited water supplies based on present uses and benefits of the water. Are the social and economic costs of water reallocation less than the real cost to develop new water supplies, whether they be desalinization plants for cities or new dam construction on rivers and streams for multiple uses? Has the justification for S. 484 been quantified? Have the studies and conclusions justifying this legislation been debated and made available to the affected parties? Are the lawmakers who will vote on this legislation capable of making an informed and intelligent vote based on the facts at hand? Have the questions been asked and answered?

We support your concern for fish and wildlife that may be impacted by the CVP. We just as importantly feel that you consider our concerns and thoughts as S. 484 or similar legislation develops.

Sincerely,

Patrick G. Tennis,
Henry Richter, Jr.,
Richard Giusti,
William P. Lockett,
Lawrence J. Pires,
Steven T. Butler,
David L. Richter,
Board of Directors.

Kern-Tulare Water District,
Bakersfield, CA, May 29, 1991.

Hon. Bill Bradley,
U.S. Senate, Washington, DC.

Re: S. 484 Central Valley Project Improvement Act

Dear Senator Bradley: As a prelude to some general comments on the provisions of this proposed act, I wish to express my concern over the need for this legislation. California's "warring water interests" have finally began to sit down at the table and negotiate consensus solutions. Examples are the Upper Sacramento River Fisheries and Riparian Management Plan and the plans currently being developed under the auspices of the San Joaquin River Task Force. Efforts such as these are producing consensus solutions. Obviously S. 484 is not a consensus solution as it places the burden of environmental restoration and maintenance entirely on the Central Valley Project. There were a great many actions which occurred both before and after the Central Valley Project that altered both the Delta and the Valley's environment.

S. 484, while purporting to make fish, wildlife and habitat new beneficial uses of the CVP, instead holds current agricultural and urban water supplies hostage to these "new" beneficial uses. As a result, the reliability of the contractors' water supplies are reduced and this will cause lenders to deny agricultural loans. As a result, prime agricultural land will go out of production and there will be reduced sales by suppliers of agricultural goods and services. However, the greatest impacts will be felt by the farm workers who have depended on agriculture for jobs and by the small rural communities where these agricultural workers live. These areas will be devastated.

Also, S. 484 requires metering of groundwater pumping. This action clearly poses some very serious legal problems as it implies the federal government is now laying claim to state groundwater.

Currently, the State of California Water Resources Control Board (SWRCB) is conducting the Bay Delta hearings. These hearings have given all interested parties a forum in which their views could be expressed. Provisions of S. 484 could be in conflict with the findings of the SWRCB. It seems reasonable that any federal legislation such as S. 484 be held in abeyance until after the SWRCB has published its findings.

If you care to discuss any of these matters in greater detail, please feel free to contact me.

Sincerely,

C.W. Bowers, Jr.,
General Manager.

Santa Clara Valley Water District,
San Jose, CA, June 12, 1991.

Hon. Bill Bradley,
U.S. Senate, Senate Hart Building, Washington, DC.

Dear Senator Bradley: Attached is the Santa Clara Valley Water District's testimony on S. 484. We ask that it be entered into the record of the hearing held May 30, 1991 in Sacramento, California.

The District is a Central Valley Project (CVP) contractor with an entitlement of 152,000 acre-feet of water from the San Felipe Division of the CVP. We also import water from the State Water Project and have extensively developed local surface and groundwater supplies to conjunctively service fifteen cities, including the City of San Jose with a total population of over 1.5 million and thousands of businesses and industries, including a major focus on the electronics industry commonly referred to as "Silicon Valley".

The District supports the general concepts of water conservation and management embodied in S. 484 but can not support the bill in its present form as it would adversely impact CVP water supply reliability to Santa Clara County. As an urban water supplier, one of this District's primary concerns is M&I water supply reliability. This concern has been especially magnified over the past two years in the shortage provisions of our CVP contract in that we must take the same shortages as agriculture while having major urban supply responsibilities. This resulted in a 50% CVP supply in 1990 and only a 25% supply this year. Because S. 484 would further degrade the existing low level of water supply reliability of the CVP, we recommend revision of Section 4(b). Rather than providing an additional 100,000 acre-feet of CVP water to the highest bidder, all CVP M&I water contractors should be provided with a reasonable water supply preference during times of declared shortage in order to prevent undue hardship. Such a provision could require that no deficiencies be imposed on CVP M&I water supplies until the deficiencies to CVP agricultural water supplies exceeded a predetermined percentage. Beyond such point, shortages would be shared ually, but with less deficiency to M&I water contractors. This concept was incorporated into several CVP water service contracts up through about 1975. Enacting such a policy into federal Reclamation Law governing the CVP would ensure uniformity of all CVP M&I water contractors thus recognizing the vital economic importance of providing a greater level of water supply reliability to urban areas and protection of public health and safety.

If an objective of S. 484 is to improve water supply to urban areas such as Santa Clara County, we further encourage your support of revised wording as we have proposed in our testimony for Section 8(d) and similar amendments to the Warren Act as provided in S. 404, H.R. 355 and S. 711, and other legislative efforts to improve the water supply reliability to CVP municipal and industrial (M&I) water contractors.

Our testimony on S. 484 also discusses our specific concerns with other areas of the bill. In conclusion, if S. 484 can be modified as outlined in our testimony to address enhanced water supply reliability and the other areas of concern, we could then support the legislation.

Sincerely,

Ronald R. Esau,
General Manager.

[Attachment.]

INTRODUCTION

The Santa Clara Valley Water District supports the general principles of water management and conservation that are embodied in Senate Bill 484 (S. 484). Our specific concerns with the bill and why we can not support it in its present form are outlined below. The District's principal concern is the need for a high level of water supply reliability to urban areas.

As both a Central Valley Project (CVP) and State Water Project (SWP) water contractor, the District acknowledges that there have been fish and wildlife impacts from the CVP, other water projects, and numerous other activities such as mining, logging, farming, urbanization, and sewage and industrial discharges. However, the District can not support the approach to mitigating such impacts that is taken in S. 484.

We do not believe this bill will meet Senator Bradley's stated objectives of "helping California cope with water problems caused by drought and population growth". We also take issue with Senator Bradley's opening statement at the March 18, 1991 hearing in Los Angeles that the water users of the Central Valley Project ". . . have been insulated from the real costs of their massive water use to the overall water supply of the State." This District is presently suffering from a 75% deficiency in its CVP contracted entitlement water supply. In 1990 a 50% deficiency was imposed on our CVP water supply entitlement. In such cases we are still obligated to pay the full operational and replacement costs for those project facilities needed to make project water available to Santa Clara County.

SUMMARY

The District agrees with the general objectives of S. 484 such as improving water conservation, encouraging water transfers, allowing the use of federal facilities for carrying over stored water for drought insurance purposes, and using the CVP to benefit fish and wildlife.

The District has encouraged and strongly supports all efforts to amend the federal Warren Act to allow the conveyance of non-project water for municipal and industrial purposes through federal CVP facilities. In addition, the CVP's San Felipe Division, from which the District receives its CVP water, includes fish and wildlife as an authorized purpose. The District has been actively involved in water conservation programs, particularly during the ongoing five year drought. One element of the District's overall water management program includes a more aggressive program of installation of meters on groundwater producing facilities, similar though more pragmatic than that sought in S. 484. Finally, the District already operates and maintains the San Felipe Division facilities of the CVP, a first step toward the transfer to local agencies of CVP facilities to be studied under Section 10 of the bill.

A fundamental concern the District has with S. 484 is the proposed role of the federal government in state and local water management issues. Many of the apparent purposes of S. 484 are already being addressed in other processes, programs, agreements, and legislation, some of which are specifically referenced in S. 484. It is unclear what S. 484 will accomplish other than creating restrictions on CVP water contracting, degrading the reliability of existing CVP water supply, and creating a degree of program redundancy.

In general, S. 484 would mean a more aggressive federal role in the CVP, state and local water issues. At the same time Section 10 of S. 484 proposes to study the transfer of the CVP to the State of California. It seems as though the bill is attempting to achieve conflicting objectives of more centralized control at the federal level while turning over the CVP to local control.

FISH AND WILDLIFE ISSUES

Although many factors have contributed to the reduction of fish and wildlife populations, S. 484 places the burden of restoration on the CVP alone. The burden would be paid in both reduction to CVP water supplies and an added $30 million surcharge to be paid annually into the proposed Restoration Fund and Trust at the expense of CVP water and power users. Other efforts such as the current Bay-Delta Proceedings of the California State Water Resources Control Board (SWRCB) recognize the many different factors and will include a review of all water rights in the Bay-Delta watershed, not just those of the CVP. This local process must be allowed to work and should be supported.

The Bay-Delta Proceedings are referenced in Section 4 of the bill, but only in the context of placing an additional constraint on CVP water contracting. The bill does not recognize the positive benefits that the SWRCB's new water quality standards and water right decisions will have upon fish and wildlife. The bill also fails to recognize that the CVP is already somewhat bound to meet the state's new Bay-Delta standards through an existing federal law that adopted the Coordinated Operations Agreement (P.L. 99-546) in 1986.

More importantly, this District is a participant in the "Agricultural-Environmental-Urban Group" now seeking resolution of California's water problems. We believe that this effort must continue to move forward.

It is unclear what the priority would be of fish and wildlife as an authorized CVP purpose, if this is the bill's intent. The District is concerned that efforts to put fish and wildlife objectives above the water supply function will lead to decreased reliability of our imported water supply from the CVP. Furthermore, a reduction in CVP water supplies to the District would cause a reduction in the amount of water available for local fish and wildlife use in the District's ten local reservoirs, 300 acres of groundwater recharge ponds and 70 miles of natural streams and channels.

A decreased reliability of the District's CVP imported water supply may lead to a necessity for the District to pursue additional sources of imported water and construct new local water projects at substantial cost to Santa Clara County's 1.5 million residents and additional local environmental impact. These additional local costs, along with the proposed $30 million annual CVP surcharge, will place an economic burden on residents and businesses.

The District opposes the $30 million surcharge and favors an approach where programs and facilities for fish and wildlife are identified and their costs appropriately allocated. The Central Valley Project Water Association has suggested such an approach.

WATER CONSERVATION AND MANAGEMENT

Sections 5 and 8 create various programs, incentives, and requirements related to water conservation and management. The District generally supports the municipal and industrial (M&I) water conveyance and the CVP carryover storage banking concepts of Sections 8(d) and 8(e) of S. 484. The District requests that Section 8(d) be clarified by inserting the following italic wording as indicated, ". . . for the impounding, storage, carriage, and delivery *of non-project water as well as* Central Valley Project water for domestic, municipal, industrial, . . ." This would help improve the water supply reliability and flexibility for CVP M&I water contractors, and other beneficial purposes.

The District also strongly supports other efforts to amend the federal Warren Act to allow conveyance of non-project water for M&I purposes through CVP facilities. The House of Representatives passed the Reclamation States Emergency Drought Relief Act of 1991 as H.R. 355 which includes an amendment by Congressman Miller providing for such a revision to the Warren Act. We urge the Senate to pass such a drought bill and also to incorporate in S. 484 the expanded wording cited above which is consistent with the proposed amendment to the Warren Act.

The carryover storage provision of S. 484 Section 8(e) is a concept of interest to the District but it is unclear how it would work, what its relationship to Section 8(d) is, or how it would be determined if federal facilities are already fully committed to project purposes; clarification is needed. The District is supportive of alternatives whereby unused CVP annual entitlement water could be carried over from year to year in order to provide a measure of insurance against water shortages in later dry years.

The requirement in Section 5(c) that all existing groundwater and surface water delivery systems be equipped with volumetric water meters within five years is overly restrictive, inflexible, and may not contribute significantly to the water conservation and management objectives of the bill. This District already has a program of groundwater management that includes metering all of the large production wells in Santa Clara County. However, there are several thousand small production wells in which water use is estimated because metering is not economically justified and would not contribute materially to water conservation or management. We suggest that a threshold quantity be used in conjunction with the metering requirement. For example, in northern Santa Clara County the District's current policy is to meter all wells that produce greater than five acre-feet per year for municipal and industrial use and 20 acre-feet per year for agricultural use.

CVP WATER CONTRACTS

Section 4 places several restrictions on renewal of CVF water contracts while also allocating 100,000 acre-feet (AF) for new 20-year contracts to the highest bidder among urban users. The District believes that 100,000 AF is not sufficient to address the water shortage for all the urban water needs. The terms and conditions of existing CVP water contracts should first be honored before new CVP contracts are entered.

Specifically, the District has sought CVP hardship water during each of, the last three years of the current drought yet received only 10,250 acre-feet during this period, and it was all allocated in 1991. It appears to be pointless in offering new CVP water to M&I contractors such as this District, through a bidding procedure, while problems still exist in providing reliable water supplies to urban areas and meeting the terms of existing CVP M&I contracts.

URBAN WATER SUPPLY RELIABILITY

The District is concerned that, as presently written, S. 484 would further degrade water supply reliability from the CVP. If the intent is to provide adequate water supplies to M&I contractors during times of general water supply shortages, this could be more effectively accomplished by stating that M&I contractors must have a reasonable water supply preference during times of shortage. This type of provision already exists in the language of several CVP M&I contracts and could be incorporated into federal Reclamation Law governing the CVP in order to provide uniformity and consistency.

CONCLUSIONS

The District can not support S. 484 in its present form because it will degrade the reliability of the CVP water supply, increase the cost of water to urban users such as Santa Clara County, and adversely affect local fish and wildlife without providing the desired goals of environmental restoration in the Central Valley. While we support the broad concepts the bill embodies, we believe it falls short of meeting its stated objectives. We believe that the existing state and local processes should be allowed to go forward and make progress toward resolving California's important and complex water issues. We urge you to consider the specific concerns we have raised in any further development of this or other related legislation.

The District would be supportive of S. 484 if it were modified to: (1) incorporate our suggestions for a revised Section 4(b) to improve the reliability of CVP water supply to urban areas, (2) include the proposed revised language in Section 8(d) which is similar to the amendment to the Warren Act contained in H.R. 355, (3) eliminate the $30 million annual surcharge and instead appropriately allocate the costs of mitigating fish and wildlife impacts attributed to the CVP, and (4) include an annual threshold quantity, for example not less than about five acre feet for M&I use and not less than about 20 acre feet for agricultural use, for determining when to meter groundwater production facilities.

PREPARED STATEMENT OF HOLLY LIBERATO, MANAGER, GOVERNMENT RELATIONS, DUCKS UNLIMITED, WESTERN REGIONAL OFFICE

Mr. Chairman and members, my name is Holly Liberato and I'm representing Ducks Unlimited, Western Regional Office. I'm before your committee today to express the concerns and support of Ducks Unlimited for Senator Bradley's bill S. 484.

Ducks Unlimited has a distinguished history of protecting, providing and restoring waterfowl habitat in both Canada and the United States. Nonetheless, there has been a catastrophic decline in waterfowl habitat and waterfowl populations, especially in the Pacific Flyway.

It is precisely these declining conditions that compels DU to support comprehensive water reform legislation such as S. 484.

As proposed by this bill, the future operation of the Central Valley Project must include the protection, restoration and enhancement of California's fish, wildlife and related habitat that's affected by the project.

This legislation, additionally, authorizes the equitable treatment for fish, wildlife and related habitat, inclusive in the other purposes for which CVP is now operated.

CONDITIONS OF CALIFORNIA WETLANDS

A couple of facts about wetlands in California:

Historically, seasonal wetlands covered nearly 4 million acres of the Central Valley. As we move into the last decade of the 20th century, only 4 percent of these original wetlands remain.

In the 1940's and 50's, 30-40 million waterfowl wintered in the Central Valley. In 1990 this number is reduced to 5-6 million wintering birds. Additionally, several million waterfowl migrate through the Central Valley to wintering areas in Mexico.

The Central Valley currently overwinters about 56 percent of all wintering waterfowl in the Pacific Flyway, and over 20 percent of all waterfowl in the entire United States.

Despite its importance to migratory waterfowl, California has lost a higher percentage of wetlands than any other state—ninety one percent loss since 1780.

Currently, less than one percent of California's total acreage is wetlands.

Conversion of wetlands to other uses, inadequate water supplies and changing agricultural practices limit California's waterfowl habitat. Water quality, disease and food loss affect the quality of the habitat. It's questionable as to which factor affect the survival rate the most.

WETLAND BENEFITS

An ideal habitat fulfills all of the species' needs. Adequate habitat provides a balance of food, shelter, water and sanctuary necessary to survive. The lack of any one essential component can reduce a species' chance of survival and reproduction.

Wetlands are among the most productive of all biological systems. More than one-half of all areas designated as "critical habitat" by the Federal Species Act involve wetland areas.

In California, more than 50 percent of all animal species designated as "state threatened or endangered" depend on wetland habitats for their survival.

In addition to providing cover for wildlife, wetlands improve water quality, absorb floodwater, recharge groundwater supplies and support numerous recreational opportunities.

Recently, there has been an increased understanding about the beneficial role wetlands play as filters for groundwater. This has become critically apparent in areas, such as California, where drought and water diversions have caused a limited water supply to become saturated with occurring or introduced chemicals.

Due to the reclamation projects and water diversions, loss of wetland habitat in the Sacramento/San Joaquin Delta has been severe.

The additional water requested—and required—by S. 484, can be used to flood ponds, create marshes and irrigate crops that are used for waterfowl food.

The majority of the water must be delivered in the fall and winter months to provide for initial water for wintering habitat. The balance is applied during the growing season to produce waterfowl food plants. If adequate water is not available, feed crops cannot be irrigated and waterfowl will crowd into smaller areas. Often these stressful conditions lead to major outbreaks of waterfowl disease, such as avian botulism and fowl cholera.

According to the research compiled for the Bureau of Reclamations "Refuge Water Supply Report", eight of the fifteen California wetland areas studied have no exiting dependable supply for water.

Much of the remaining wetland acreage in the Central Valley is publicly owned—Fourteen state and federal wildlife refuges. These Central Valley refuges currently receive less than eight percent of the water needed to provide adequate winter habitat.

The Central Valley Joint Venture has identified the need for 400 to 450 thousand acre feet of additional FIRM/PERMANENT CONTRACTED water annually.

Absent water of good quality and in sufficient quantity, wetland can not provide complete ecological functions and values. Consequently, a net loss results. In the western United States, large amounts of wetland acreage have been lost, not to a bulldozer, but to the lack of water. Significant increases in wetland and wetland habitat can be achieved by ensuring an adequate supply of annual water. This legislation recognizes that wetlands and wildlife are a valid user of water and must be included in federal water programs.

CLOSING

The 1990's will likely be an environmental decade. Positive achievements will require the cooperative efforts of agriculture, industry, government, individuals and private organizations.

With cooperative agreements, farmers and conservationists can become full partners in achieving wetland reclamation. DU has worked with farmers from the San Joaquin/Sacramento Delta who want to protect their wetlands and who are willing to restore or enhance habitat on their property. We have found that when given the guidance and opportunity, many farmers are enthusiastic about implementing conservation programs and practices on their land. DU recognizes the need to cooperatively work with farmers and government to initiate additional agricultural-wildlife enhancement programs. Thereby, gains are made for both farmers and wildlife.

In closing, we ask that you consider the longevity of the Central Valley wildlife. Renegotiations of Central Valley Projects contracts should provide for environmental consideration. The avoidance of future destruction of existing wetlands should be a top priority. I thank you for this opportunity to express the importance of this legislation, and we sincerely thank Senator Bradley for his concerns and commitment to wildlife preservation.

CITY OF ORANGE COVE,
Orange Cove, CA, May 22, 1991.

Hon. BILL BRADLEY,
Chairman, Senate Subcommittee on Water and Power, Washington, DC.

Re: Opposition to S. 484/Central Valley Project legislation

DEAR SENATOR BRADLEY: Please be advised that the City Council of the City of Orange Cove at their regularly scheduled Council meeting on Wednesday, May 22, 1991, wholeheartedly and hereby voice their adamant opposition to S. 484, the proposed Central Valley Project legislation.

This community as well as many others in the Central Valley rely and depend on the Agricultural industry to their on-going and continued need for existence. The provisions that limit renewal of reclamation contracts to a year to year basis would have significant negative ramifications on agriculture and the City of Orange Cove which is supported, to a great extent, by agriculture production. In addition, the limited availability of all ground water as your bill proposes would not be conducive to this City's ability to continue providing services as we now know it.

Although this municipality as well as Governor Wilson support on-going efforts to restore fish and wildlife in the Central Valley, we cannot support measures which threaten the viability of California's economy and more specifically, the City of Orange Cove's.

On behalf of this municipality, which has its roots directly tied to the agricultural industry, we cannot support measures that affect said industry in such a way that irreparable damage would occur in that process.

Sincerely,

VICTOR LOPEZ, *Mayor.*

FRESNO COUNTY FARM BUREAU,
Fresno, CA, May 30, 1991.

Hon. BILL BRADLEY,
Chairman, Subcommittee on Water and Power, Washington, DC.

DEAR SIR: The members of Fresno County Farm Bureau, representing 5,000 farmers and nearly 2,000 other members, are appalled at the prospects of the decimation of California agriculture as outlined in your proposed bill S. 484.

Farming in California is NOT a series of cliches dressed up in bib overalls, it is rather, a way of life . . . YOUR way of life in fact, with over 50% of the fresh fruits and vegetables YOU enjoy in a lifestyle made possible by California agriculture that you are now attacking.

We urge an end to this effort, we ask that cool heads without personal vendettas and threats sit down and rethink this entire process.

Selfishly, we too enjoy this way of life and this lifestyle. We want to protect it, for ourselves, our families and the future generations of people who will hopefully follow us into the fields of the nation's richest and most diverse farming endeavors.

To tamper with a system, that while certainly not perfect is nonetheless the best there is, is to our way of thinking, intolerable!

Thank you for listening to our feelings on this bill.

RICHARD H. GERINGER,
President.

PREPARED STATEMENT OF K.B. SMITH, EXECUTIVE VICE PRESIDENT, CALIFORNIA COTTON GROWERS ASSOC. AND CALIFORNIA COTTON GINNERS ASSOC.

Mr. Chairman and Members of the Subcommittee: I want to thank the Chairman for holding this, the third hearing on the Central Valley Project Improvement Act, in California. S. 484 is dramatic and far-reaching legislation that must be carefully evaluated regarding its potential impacts on the rural economy of California prior to action by this Committee and the United States Senate.

The California Cotton Growers Association in composed of 3,000 cotton, grower members from throughout California. The California Cotton Ginners Association includes among its members all of the cotton ginning cooperatives and companies doing business in California.

During the growing year 1990 the San Joaquin Valley of California produced 2,933,473 bales of high quality cotton. The value for cotton and cotton seed produced in the Valley in 1990 was $1,332,181,000. San Joaquin Valley cotton is of an exceptional quality and commands substantial premium on the world market. Over 70% of San Joaquin Valley cotton is exported into foreign textile markets. Virtually every bale of San Joaquin Volley cotton produced in any particular growing season is sold, and is not held in surplus.

The quality and productivity of San Joaquin Valley cotton is in large part due to the innvation and sophistication of San Joaquin Valley cotton growers. Their willingness to implement new technologies, including laser leveling, innovative pest control methods and variety research has enabled them to become the most productive cotton growers in the world. In addition to their important human resources, the most valuable resource necessary to achieve this high level of productivity and economic benefit to the region, the state and the country is a certain and adequate water supply. In this regard, I express the following concerns regarding S. 484 "The Central Valley Project Improvement Act."

1. S. 484 by expanding the purpose of the Central Valley Projust (CVP) so as to protect, restore and enhance fish, wildlife and related habitat, and to provide equita-

ble treatment for fish, wildlife and related habitat, will cause a redirection of the CVP water supplies which will decrease water delivery reliability and prioritize the use of CVP water for fish and wildlife in the San Joaquin Valley;

2. S. 484 will hold renewal and additional water service contracts of the CVP hostage unless and until the specific restoration goal set forth in the Act have been met, and the current Bay-Delta hearings have been completed and approved by the Federal Environmental Protection Agency (which otherwise has no right to review the hearing results). A CVP contractor would be allowed to ransom a longer water service contract by agreeing to give up 10-20% of the water supply for fish and wildlife purposes;

3. S. 484 would direct the Secretary of Interior to obtain specific restoration goals, most of which are difficult or impossible to attain without causing harm to those currently benefiting from CVP watdr. While the funding mechanisms for achieving the goal set forth in S. 484 have been identified, the mechanisms for achieving such results have not been identified; and

4. S. 484 provides for enforcement of its provisions through citizen suits.

S. 484 places the full burden of the desired restoration of the Central Valley on the backs of CVP water users. While we acknowledge that fish and wildlife populations have declined in the Central Valley, we cannot accept the notion that the responsibility for restoration and/or enhancement is solely that of the Central Valley Project.

California has been able to achieve equitable remedies to various environmental problems associated with water in the past. These balances have been achieved without employing punitive mechanisms which dramatically affect the historical water rights of an important economic and social region of California. We encourage this Committee to explore the causes in the decline in fish and wildlife in the Central Valley of California prior to identification of equitable mechanisms for restoring and/or enhancing those portions of the fish and wildlife resources of the Central Valley which can be practically achieved.

Cotton is an important component of the economy of the San Joaquin Valley from Merced County in the north to Kern County in the south. A 10-20% reduction in the water supplies for the Federal Central Valley Project would have devastating economic effects on our industry as well as many other agricultural industries resulting in the loss of farm jobs and jobs in related service industries. This result will not be helpful or beneficial to the people of California. Your consideration to these matters will be most appreciated.

PREPARED STATEMENT OF STEPHEN H. SUAGEE, OFFICE OF TRIBAL ATTORNEY, HOPPA VALLEY TRIBE

The Hoopa Valley Tribe appreciates this opportunity to submit additional testimony regarding the Central Valley Project Improvement Act for the record of the May 30, 1991 hearing that was held in Sacramento. Tribal representatives, including the author of this statement, were present throughout that hearing, and some of our comments herein address points that were raised by various witnesses at that time. The primary purpose of this testimony, however, is to explain the May 8, 1991 decision of Interior Secretary Manuel Lujan, which mandates substantially improved Trinity River streamflows for 1991 through 1996.

The Tribe testified previously regarding S. 484 on one of the panels at the March 15, 1991 hearing in Los Angeles; we also submitted written testimony at that time. That testimony described the status of the Tribe's three-year administrative appeal of unlawful reductions in Trinity River streamflows. The basic contention of that appeal has been that persistent reductions in Trinity fishery streamflows are inconsistent with reserved tribal water and fishing rights, particularly where those reductions were imposed by the Central Valley Project in order to maintain full water deliveries to CVP customers. The Tribe noted in its March testimony that although we anticipated some sort of decision by the Secretary in time for water year 1991, it was very clear that the CVP was doing everything in its power to frustrate the decision process.

Happily for the Tribe, the Secretary paid attention to the overwhelming administrative record in support of improved Trinity streamflows, and on May 8, 1991, he rendered a decision that mandates the improved streamflows sought by the Tribe for water years 1991 through 1996. In addition, the decision was based on a joint recommendation by the Assistant Secretaries for Indian Affairs, Fish and Wildlife and Parks, and Water and Science. In the end, therefore, even Reclamation recognized that the position and tactics of its CVP were legally indefensible; the Tribe in turn recognizes that Reclamation Commissioner Dennis Underwood was ultimately committed to a reasonable resolution of the Tribe's streamflow appeal.

A copy of the May 8 Secretarial decision documents are attached to this statement. In essence, the Secretary mandated an annual Trinity instream release of not less than 340,000 acre feet for water years 1992 through 1996, except for so-called critically dry years, in which case the annual release shall be 340,000"if at all possible" (which phrase is defined in the joint recommendation of the three Assistant Secretaries). The streamflow for 1991 has been established by a "ramping" formula tied to projected Shasta Reservoir inflow as of June 1, 1991; under the June 1 projected Shasta inflow of 3.05 million acre feet, the ramping formula has resulted in a 1991 Trinity streamflow volume of 290,000 acre feet. The volume for this year is thus more than double the 140,000 acre feet volume which the CVP had been willing to provide under the previous Secretarial flow policy of January 14, 1981.

It is very clear from the documentation accompanying the May 8 decision that the Secretary recognized that such streamflows were an absolute legal obligation of the Interior Department. Indeed, the decision clearly recognizes that the Department must insure adequate fishery streamflows for the Trinity River before any water may be exported from the Trinity basin for the benefit of the CVP.

There are at least two independent legal bases for the Department's Trinity River obligations that were recognized in the process leading to the May 8 decision. The first basis is the Department's trust responsibility to protect tribal fishing and water rights, which is expressly identified in the decision documents.

The second basis is Section 2 of the very statute by which Congress authorized the CVP's Trinity River Division in 1955. This basis is not directly referred to in the decision documents, but it was discussed in an April 3, 1991 Indian Affairs (BIA) briefing paper (which is mentioned in the decision documents and a copy of which is attached) on the Tribe's appeal that was sent to the Reclamation Commissioner and the Director of Fish and Wildlife (FWS). The April 3 BIA briefing paper notes that in 1979, the Interior Solicitor interpreted Section 2 of the 1955 Trinity River Division Act as an express Congressional constraint on the Secretary's authority to fully integrate Trinity water into the CVP and as an affirmative requirement to insure that Trinity basin water needs are met before water is exported to the CVP.

The May 8 decision documents also expressly note: that the decline of the Trinity fishery "has reached crisis proportions for 1991"; that tribal fishing in the Klamath-Trinity basin will be drastically curtailed this year to "emergency subsistence levels" only (with no commercial fishery whatsoever); that "minimum spawning escapement levels may not be reached"; and that the ocean commercial fishery dependent on Klamath-Trinity salmon stocks "will be at the lowest rate in recent history."

The May 8 decision also addressed the issue of the threatened winter run chinook salmon in the Sacramento River. Since the listing of this threatened species, the CVP has argued that Trinity exports are now needed for the additional, pretextually "environmental," purpose of maintaining adequate water temperatures in the Sacramento River for the benefit of the winter run. The Tribe has consistently pointed out that, due to operational constraints, Trinity water cannot help the winter run in the Sacramento. We have noted that Trinity water warms by up to ten degrees F. as it travels thorough the CVP export system and arrives in the Sacramento a good bit warmer than the cold water available at the bottom of Shasta Reservoir. We have pointed out that the Endangered Species Act does not authorize the Department to commit a breach of trust on the Trinity River, and that Sacramento River water quality problems must he resolved with water resources available from within the Sacramento basin. We have also noted that the CVP has opportunistically portrayed the cold water needs of the winter run as coinciding with the standard export pattern that has always benefited CVP irrigation and hydropower customers.

The false argument about the winter run was raised by several witnesses at the May 30 hearing in Sacramento. The May 8 decision documents, however, contain the following conclusion:

> Water diverted from the Trinity River to the Sacramento River can only minimally influence the management of the threatened Sacramento River winter run chinook due to the relatively small quantity of water diverted, the physical constraints on diversion rate, and because it is significantly warmed during the diversion from Trinity Lake through Lewiston, Whiskeytown, and Keswick Lakes. The Bureau's April 17, 1991, preliminary CVP operations analysis showed that decreasing Trinity River diversions to the Sacramento River by 100,000 AF would only increase Sacramento River temperatures by .1 degree

Fahrenheit (from 64.0 to 64.1 degrees in August). The target temperature for protecting winter chinook is 56 degrees.

This conclusion, essentially confirming the Tribe's position, should put to rest the specious claim that Trinity water should somehow be available on a priority basis to fix environmental problems in the Sacramento basin. Unfortunately, the CVP has apparently not yet got the message from its superiors in Washington. At the May 18 meeting of the Congressionally established Trinity River Task Force; the Task Force Chairman (who is also the Reclamation Regional Director) stated that the Endangered Species Act was one of the federal statutes that might prohibit implementation of the May 8 decision in so-called critically dry years. (The May 8 decision states that the Trinity streamflow in such years shall be 340,000 AF "if at all possible", which the Assistant Secretaries' joint recommendation defined as "if the water is physically available and can be released into the Trinity River consistent with existing Federal Statutes and Regulations.") It is clear, however, from the overall decision that the Secretary has recognized that his decision was itself required by existing federal law and statutes.

The CVP also attempted to resurrect the specious winter run argument at the May 24 meeting of the North Coast Regional Water Quality Control Board. The CVP sent several representatives to this meeting to oppose the adoption of biologically appropriate temperature standards for Trinity River salmon and steelhead. The Regional Board was not fooled by this argument, and amended its basin plan to incorporate the temperature standards.

The attached articles from the Trinity Journal newspaper (Weaverville, CA in Trinity County) discuss both the Trinity Task Force and Regional Water Quality Control Board meetings where the CVP took the positions described above.

The CVP is thus apparently still trying to resist the Trinity streamflow policy reform mandated by the Secretary pursuant to thorough Departmental review of the applicable law and biology. The Tribe salutes the Secretary for his positive decision, but points out that CVP resistance caused a two-year delay in the decision process after the Tribe's appeal was elevated to the Secretary. Accordingly, the Tribe believes it is appropriate for Congress to enact statutory provisions that would confirm the Secretary's decision and facilitate the process of developing permanent Trinity streamflow policy after various biological and geomorphic studies of the Trinity River are completed in 1996. We have submitted suggested language with our March 15 testimony, and would be pleased to continue to discuss such language with Subcommittee staff.

Once again, the Hoopa Valley Tribe appreciates the opportunity to submit this additional testimony on a matter of critical importance to its future cultural and economic welfare.

PREPARED STATEMENT OF BRAD EIDMAN, BRANCH MANAGER, COLUSA-GLENN PRODUCTION CREDIT ASSOCIATION

Mr. Chairman, and members of the Committee: I am Brad Eidman, Branch Manager of the Colusa-Glenn Production Credit Association (CGPCA). CGPCA is a member of the Western District of the Farm Credit System.

CGPCA is authorized by the Farm Credit Act to provide short and intermediate term credit to ag producers, farm service businesses and certain ag commodity processing operations in Glenn and Colusa Counties. We also have outstanding loans with operators in Tehama, Butte, Yolo and Yuba Counties. Our current membership represents approximately 400 such operations the majority of which are direct producers of food and fibre. A number of these member borrowers rely upon irrigation water provided by the CVP as an essential input to their ag operation or make their primary income by providing on farm services to producers who rely upon CVP water.

While we appreciate the noble intent of S. 484, the practical reality is that its implementation will be a severe threat to the reliability of water supplies in irrigation districts served by the CVP.

By statute the Farm Credit System is only to loan money to operators served by reliable water supplies where irrigation is essential to production of the crops being grown. We could not in good conscience consider the water supply in districts served by the CVP as reliable were S. 484 to be implemented. As became clear in the mid 80's restrictions in credit to farmers have a ripple effect felt far afield from the rural areas of the nation. At a time when California's own credit rating is being questioned it seems imprudent at best to dry up the largest economic contributor in the state.

While this association is not a farm mortgage lender we are jointly managed with the Federal Land Bank Association of Colusa and work closely with the Federal Land Bank Association of Northern California. These real estate lenders are called upon to make loans of up to forty years in length for the purchase of farm real estate. One of the basic tenants of such long term lending is that loans only be written where a stable long term water supply can be documented. Again such would not be the case under S. 484. As a direct result the availability of term credit for land purchases in areas relying upon CVP water would be severely restricted if not completely eliminated. Further, collection of existing loans in these areas would be questionable. The implementation of S. 484 would raise questions in the figurative mind of the Farm Credit System auditors for which no clear answers could be given. The implications to our system and our members are threatening to say the least. Whatever amount our business were diminished because of collection efforts aimed at CVP users would have an effect on other borrowers. Even those not served by the CVP would feel an indirect effect. This might be reflected in higher interest costs and less available staff time.

In closing let me state that we have seen a renewed interest among our borrowers in their role as stewards of the natural resources attendant with land ownership and use. This rekindling of long standing concern for air, water and wildlife has come about for many of the same reasons that have prompted renewed interest in the public at large. The ag community is certainly willing to shoulder their fair share of the costs associated with resource management.

In return however these people need to maintain a commensurate share of the authority over decisions that will be made affecting the basic inputs essential to their survival.

Thank you for the opportunity to present this statement. I will make myself available to any committee member or other interested party to give further input should the need arise.

FEATHER RIVER STATE BANK,
Yuba City, CA, May 28, 1991.

Committee on Energy and Natural Resources,
Subcommittee on Water and Power, State Capitol, Room 112, Sacramento, CA.

RE: Senate Bill 484—Central Valley Project Improvement Act

My name is Charles M. Lewis, president of Feather River State Bank in Yuba City, California.

We are a community bank actively involved in agricultural lending. We make short-term agricultural loans for our own portfolio, and we originate real estate loans for the secondary market under the Farmer Mac Program and a Farmer Mac Pilot Program.

In addition, I serve as the chairman of the California Bankers Council of the Independent Bankers Association of America (IBAA); and, I also serve as vice-chairman of the Agriculture-Rural America Committee of the IBAA.

Senate Bill 484 introduced by Senator Bradley, will bar the renewal of CVP water contracts for more than one year for any purpose other than fish or wildlife until certain conditions are met. Passage of S. 484 would greatly inhibit the ability of California banks to continue to provide agricultural financing. The impact of S. 484 on agricultural credit availability is critical because one of the criteria for establishing the credit worthiness of a farm borrower is the lender's ability to determine that there is a reasonably certain source of irrigation water on a continuing basis. Any law that endangers the ability of farmers to continue to have access to federal water will have a devastating effect on farm credit availability.

Sincerely,

CHARLES M. LEWIS,
President.

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